fueloil & oil heat

SEPTEMBER 1959

★★★ EDITION

37 Years devoted to Progress in Oilheating and Airconditioning

Ulcers with Profits

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Burners more efficient with positive air Supply

Zoning Refinements

Giffords looks for perfect forced-air Heat

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✓ Heating Oil
✓ Kerosene
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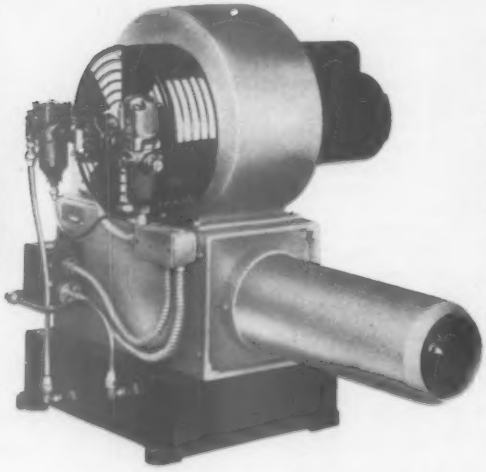

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In factories, warehouses and apartment buildings—in schools, churches, hospitals and institutions throughout the United States, the SUN-RAY #4-#5 OIL BURNER is providing real, honest-to-goodness heating economy.

By efficiently burning low cost, high Btu #5 or #4 oil, it drastically cuts fuel bills.

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SEPTEMBER fueloil & oilheat 1959

VOLUME 18 NUMBER 9

Editorial, circulation and advertising Office: 2 West 45th St., New York 36, N. Y.

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Among other things . . .

Two other thought-provoking features are recommended. One—begins on page 72—tells how Dalton Oil has been successful in correcting burner complaints by the installation of a fresh air duct to supply combustion air. The second article by John Schulz describes the zone control arrangement for forced air heating worked out by Harry Giffords. Starts on page 76.

Cover photo: A somewhat typical fueloil delivery scene identifies this issue as the one containing our annual study of fueloil management practices. The information tabulated in the feature beginning on page 61 represents the cream of the data supplied us by a group of fueloil distributors. They filled in comprehensive questionnaires about their business and made worth while the long hours of office work needed to analyze these figures. The study presents an accurate profile of the retail fueloil business and it should be useful for comparative checking.

EACH YEAR in this issue appears a rather wide analysis of fueloil distribution and management practices. It is a job of setting some of the ducks in a row from year to year to get the measure of change. The preparation of this piece of printing takes a lot of days for several persons, but it would be impossible without very wonderful cooperation from a few hundred fueloil distributors over the country.

They supply this help by digging into their records for figures for the benefit of the industry as a whole which means indirectly they are benefitted too. There is no way to properly thank these men individually but we can tell them that as we work over the questionnaire sheets before destroying them, we get a glow of good feeling in seeing their names and recognizing that here are real friends of the industry.

THE FUELOIL crowd in the Pacific Northwest has never had a reputation for hanging around to see what happens elsewhere and then trying it. Some of the Eastern doings naturally rub off on them, but they are much more inclined to step out and start something either in a new way or for the first time.

Their new subsidy program for builders is just another link in a long chain. They are in their eighth year of cooperative advertising promotion, spending one-tenth cent a gallon and building a fund that leads all others considering the size of their market. But the subsidy program is something brand new.

The Regional Advisory Council of the Pacific Northwest, which is the entity guiding the cooperative projects, has set out to spend $100,000 as an experiment in the direction of oilheating equipment subsidy. It is to be conducted in only a few selected spots.

Furnace dealers, plumbers and heating men generally are to be given $100 a job just as a bonus when they install oilheating in a building development in areas that face strong competition from gas or electric heat. The men on the Council have seen enough examples of subsidizing installations by both gas and electric utilities that they want to try it too. Because the heating load in the Pacific Northwest and the heat loss of the average home calls for a modest size of furnace, the oilheating people are handicapped by just about $100 in comparison with gas heat installations.

The heating dealer can reduce his price $100 and place his oil job in line with gas. The questions to be answered naturally are: Will the builders prefer oil at an equal installed cost, and will the heating dealers show a preference one way or another?

The $100,000 cost of the experiment is to be shared equally between the refiners and the fueloil distributors on a gallonage basis.

THE NATIONAL FUELOIL COUNCIL is cooperating with the National Association of Manufacturers in the preparation of a fifteen minute film for television to show the American public something of the life and times of a local fueloil distributor.

This is to be part of the N.A.M. series now being shown under the title, "Industry on Parade." The oil man selected for the hero of the piece is Francis J. Schuster of Troy Oil Co., Indianapolis. Having seen the results of the original filming, we can say that Schuster is photogenic.

The film gets in some very nice points of our industry's story and at the same time carries enough human interest to be good entertainment. It will be shown by N.A.M. on 352 TV stations to an audience of 52 million people. After this complete showing, or in about two years, the film can be bought very reasonably for showing by local industry groups.

TWO OF THE FEATURE articles in this issue are somewhat controversial. One is about Dalton Oil Company's fresh air duct installed for domestic oilburners and the other describes Harry Gifford's original idea of zone control with forced air heating. The authors point out that not everyone is going to agree with either the theory or practice. Nevertheless, we are glad to publish them on the score of being the "thinking man's" approach and if either of them starts an argument so much the better.

SOMETIMES our feelings can be hurt by not being taken seriously and that goes for an industry as well as individuals. The Gas Appliance Manufacturers' Associations in a bulletin from its president E. A. Norman is alerting the gas industry to the threat of competitive fuels in the 1960's.

We wish he was much more worried about oil heat than he appears to be. It is obvious that the electric industry is his real concern. He does mention oil in a rather friendly way, but points out that "The oilheating industry up to this time has not been a promotional giant nor has it ever presented an effective industry front in promoting either its fuel or its appliances."

Perhaps we can share with Mr. Norman a considerable degree of concern over the potential growth of electric heat in the decade just ahead. The chances are that we will be putting up about as much of a fight for our position as will any of the three industries. All of which brings to mind the information that Edison Electric Institute is planning considerable advertising promotion for electric heating starting next year.

THE FOLKS who put together the Discomfort Index certainly have had an uphill job. The Weather Bureau adopted it which was fine, but then the Chambers of Commerce and Travel Bureaus started screaming. New York for example was being proclaimed on radio and TV by its degree of discomfort.

So they called it the Temperature-Humidity Index, but now John Gambling on the radio notes that "the T.H.I. is 79 today which is about as uncomfortable as you can get."

Bob Gray

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fuel oil & oil heat

by James M. Collins

WASHINGTON—The apparent attempt by the Republican party to disassociate itself from any idea that it is a strong supporter of the oil industry was never clearer than during the voting near the tail end of the session on a bill by Senator Gruening (D, Alaska) to enlarge the oil and gas leasing and option limits in the new state.

All but two of the 32 votes on a motion by Senator Allott (R, Colorado), to send the bill back to the committee for further study came from the republican side of the aisle. Only two democrats (and one of them is a "sometimes" democrat—Lausche of Ohio) voted with the republicans. All of the 55 votes against recommittal came from the democratic side.

One reason for the strictly partisan vote may have been the burning feud which has developed in recent months between the senator from Alaska and Interior Secretary Seaton. The latter recently charged that another bill by Gruening (to give Alaskan homesteaders mineral rights beneath their lands) was a "give-away," and this really shifted the sputtering feud into a red-hot one. Perhaps Seaton was still smarting from the republican debacle in the first elections held in Alaska, in which the democrats nearly swept the slate. In any case, it was Seaton's lieutenants in the Interior Department who inspired the attack on Gruening's leasing bill and urged it on. Allott's speech foreshadowed the presidential veto on August 17.

However, the Senate vote was a real shocker to western oil representatives who believed that the bill had merit and had every reason for support from both the GOP and democrats. How the solid GOP vote to kill the bill was put together is still a secret—but it has ominous overtones for the Industry in the months ahead, particularly with the presidential election fast coming up and with many political oil issues ahead. Some of these include proposals for the divorcement of oil pipelines from shipper-owners, the oil-gas depletion allowance, legislation to bar "good faith" defenses to price-discrimination charges under the Robinson-Patman Law, and many others.

Seaton's Attitude on Oil

Although the Industry has many problems in Congress, it has important day-to-day associations with the Interior Department, involving many agencies there. Interior, of course, is also the contact point for the National Petroleum Council, administers the oil imports control program, and is a coordinator of all the government's work on oil matters, through the Office of Oil and Gas. Therefore, it is the one agency upon which the Industry pins its hopes for fairness.

Ever since the former White House aide took the top Interior post, oil has fared badly. One story, perhaps apocryphal, is that Sherman Adams at the time instructed Seaton to "clean up oil at Interior." And, certainly Seaton has been unstinting in his enthusiasm to lean over backwards—against the Industry.

For example, he wrote NPC Chairman Walter Hallanan a letter saying he was convinced that NPC should be headed by a government official. This would have killed the NPC. A year later, the issue was compromised with appointment of a government official as NPC "co-chairman." Seaton also got tough about oil-gas leasing on "wildlife" areas (prohibiting development except where there is drainage from private wells outside).

DJ May File Another Tough Report

Indications are that the Department of Justice plans another "tough" report under the Interstate Oil Compact extension law, dealing not with the Compact's compliance with Article V (against price-fixing) but with activities of major oil companies.

During consideration of the bill, the DJ urged Congress to drop this reporting requirement—but it stayed in. DJ said its earlier reports showed the Compact was "clean as a hound's tooth," and further reports would only embarrass the DJ in its oil antitrust work. Last time, the Attorney General's report came right up to the brink of recommending divorcement of oil pipelines. Now, observers wonder if the next report will go all the way.

Gas Pipeline Expansion Seen

Two big projects are nearing the final stages of approval before the FPC—one to import over 200 million cubic feet daily from Canada into the upper Midwest. Another—by Trans-Western—to hike gas shipments from the Southwest to California by 300 million cubic feet a day was OK'd by FPC provided that the producers accepted rollbacks in their prices of as much as 5¢ per thousand. Also, FPC required that producers agree to waive their right to utilize Section 4 short-cut procedure to seek higher rates later. Whether this latter condition is legal is still a question among the lawyers.

Import Control Changes Eyed

Little relaxation is foreseen in control of oil imports, despite some recovery in oil prices in recent months, particularly on gasoline, and expectations that fuel oil prices, particularly on residual, may rise this fall. On the contrary, any change in the program likely would be to cut back the total level (now set at 9.1% of demand of crude, finished and unfinished products—not including residual—East of the Rockies). There's still "too damned much oil," and the prospects are that reserve supplies will keep growing. Even if all imports were cut off, the availability of crude oil would exceed demands by 2,000,000 barrels daily, some experts point out. There is no prospect of such a cut-off, but neither is there any prospect of removing oil imports controls, for a long time. Some changes, however, may be forthcoming. For one thing, the Administration would like to open up imports of finished products to more companies and individuals—the "newcomers." In addition, the plan may be tightened up for Puerto Rico, to prevent increasing product shipments from there to the mainland.

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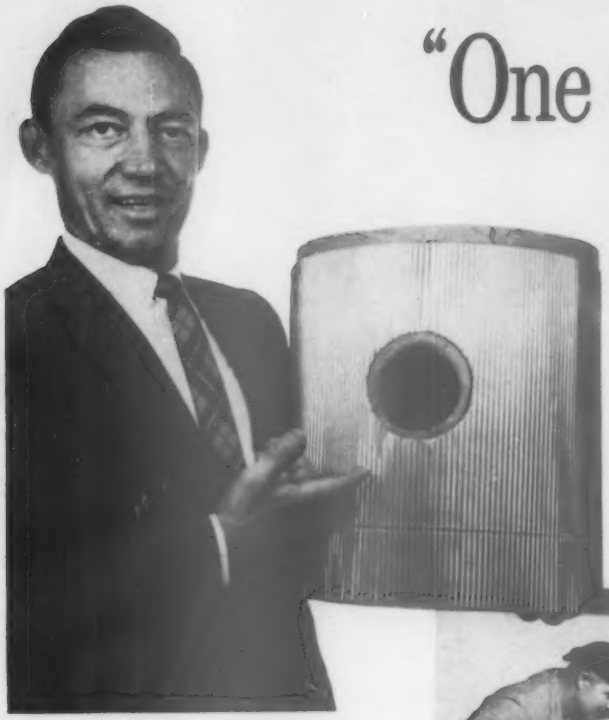
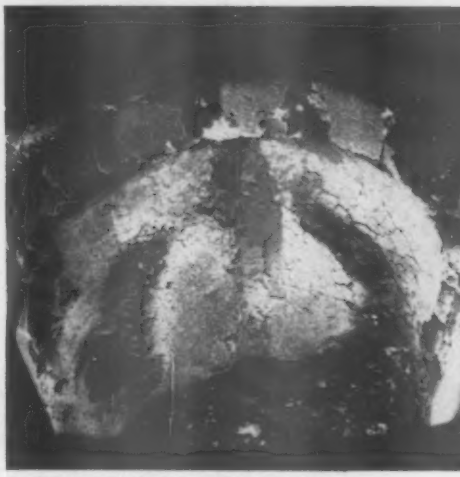


Says
George Bernard, Chief Engineer,
Sid Harvey, Inc.,
Oil Burner Supply Specialists,
Valley Stream, New York

Here's how easy it is to install a new Cerafelt combustion chamber inside the present worn refractory chamber:



9:00—Esso Standard Oil serviceman sees chamber needs replacement.

9:30—Complete unit in place and Cerafelt sticker put on burner wall.

New Johns-Manville Cerafelt kits let you install a better firebox . . . at less cost!

JOHNS-MANVILLE JM PRODUCTS

Cerafelt combustion chamber —*in 30 minutes!*"

"J-M Cerafelt® installs faster and easier than brick with no cement, mess or clean-up. And this lightweight unit produces a better firebox, yet it costs us less to work with and lasts indefinitely.

"Working with a Cerafelt kit," continues Mr. Bernard, "one man can complete a combustion chamber installation in 30 minutes instead of the usual 5 hours. All he needs is a sharp knife, snips and screwdriver.

"Cerafelt fireboxes heat up in seconds, and cool off just as fast. They absorb burner noises and thus provide a quieter operating unit."

9:10—He measures and cuts stainless steel sleeve from roll supplied in kit.

9:20—Cerafelt bottom and liner are easily cut to fill sleeve.

9:25—Chamber is disassembled and put together inside burner.

With new Cerafelt combustion chamber kits, installation is fast, easy. The kit consists of Cerafelt refractory felt, stainless steel backing, screws and an instruction sheet.

Regardless of the shape of the old chamber, it's easy to completely assemble and install a new Cerafelt combustion chamber *in just 30 minutes!* And the new chamber will save the homeowner 20% in fuel bills by providing a hotter, cleaner flame that reduces smoke and soot.

Send the coupon today for further information on new J-M Cerafelt combustion chamber kits.

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Names in the News

Charles M. toeLaer has been named division manager, Jackson & Church Div., York-Shipley, Inc., York, Pa. *Richard J. Hoover* has become general sales manager. Mr. toeLaer, who has spent 18 years in the Home Heating and Cooling Dept., General Electric Co., now is responsible for planning new design, engineering and sales programs for Jackson & Church commercial and industrial warm air heat equipment. Hoover, who for the past year has been developing an expanded corps of field salesmen and representatives, now assumes active leadership of this group.

R. Lisson has been appointed manager of market Research, Davis Engineering, Wallington, N. J. Lisson, with Davis since 1945, will direct an expanded program of advertising, sales promotion and market research. At the same time, *Lawrence Nigro* was appointed district sales manager for the states of New York and New Jersey.

Dr. Finn J. Larsen has been named to the newly-created post of vice-president in charge of research, Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. He has been director of research since 1943 and will continue to direct activities of Honeywell's central research laboratories in Minneapolis, plus providing research program guidance for all company divisions.

William W. Suggs, Jr., Westerville, Ohio, has been named district sales manager for the Columbus, Ohio, trading area by Iron Fireman Mfg. Co., Cleveland 11, Ohio. He will handle residential and commercial heating and cooling equipment. He had been with Minneapolis-Honeywell for 12 years and with Socony Mobil as a field engineer for the past two years. *Martin J. Wisehart* has been named district sales manager for Iron Fireman's residential and commercial equipment in northwest Ohio and five counties in Indiana.

Peter L. Quattrochi has advanced to the position of sales manager, Taco Heaters, Inc., Cranston 9, R. I. He had been manager of customer services and now assumes charge of the administration of all field sales and service activities. Before joining Taco, Quattrochi was employed by G-E in sales administration.

John J. Hayes has been named New York sales manager, L. J. Wing Mfg. Co., Linden, N. J. He has been with Wing since 1954 as a sales engineer in the New York branch office he now will head.

Robert A. Barr is general manager, refractories division, Babcock & Wilcox Co., New York, N. Y. He formerly was assistant general manager of Carborundum's refractories division, where he gained more than 30 years' experience in the field.

Richard J. Leaman has become credit manager, Airtemp Div., Chrysler Corp., Dayton 1, Ohio, succeeding *John A. Linneman*, who will continue with the credit department as special assistant responsible for field contact with distributors, dealers and Airtemp field personnel.

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Cost is so nominal you can equip all your jobs for fast, safe deliveries.

WHISTLER
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WELL BUILT Completely protected against corrosion. Lasts indefinitely. An engineering triumph for you by Applied Mechanics Company.

SAFE The Whistler is Underwriters Approved. Gives top performance without fail. Has been thoroughly field-tested nationally. Pitched for ideal, easy-to-hear signal. Gives less back-pressure than do competing exhaust signals, should tank be over-filled for any reason.

EASY TO HANDLE The Whistler is ore compact; lighter than ¼th the eight of competing signals. Takes less rage space. Costs less to ship. Can installed in a jiffy. *One size only for installations.*

WER PRICED The Whistler's exclu- design and manufacturing process it lower price to bring you easier more sales, and greater profits. the Whistler is used with the an or other fractional-reading you have *all the advantages of arate instruments at less cost combined signal-and-gauge.*

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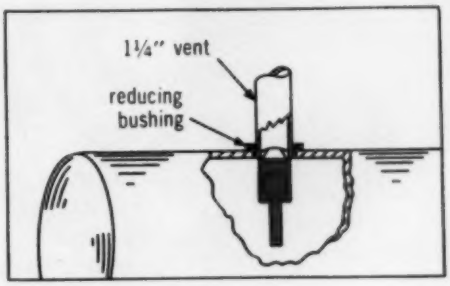

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Lightweight and three convenient carrying handles make this machine easy to carry and easier to empty with the aid of the Throw-away Bag. The cannister is protected by a new dollie assembly that not only acts as a mount for four swivel casters but also is encased in a rubber bumper that protects walls and objects from being marred. —

LITERATURE ON REQUEST

JOBBER DISTRIBUTOR ENQUIRIES INVITED

Sylvan E. Leinwand has been appointed eastern regional manager, Detroit Controls Div., American-Standard, Detroit, with headquarters at Stratford, Conn., succeeding *K. B. Thorndike*, retired. Leinwand joined Detroit Controls in 1948 as New York territory representative, became regional specialist on refrigeration controls for New York City in 1955 until he transferred to regional headquarters at Stratford in 1957.

C. E. Woollen, Jr. has been named manager of product engineering and development, John Wood Co., Heater and Tank Div., Conshohocken, Pa. He has specialized since 1942 in design and engineering for the heating industry and was general manager for Anchor Post's special heater division when John Wood acquired that division in 1956.

Dale L. Bunday is now national product planning manager for two-way radio equipment engineering by General Electric Communications Product Dept., Lynchburg, Va. He succeeds *Robert L. Casselberry*, recently named acting manager of G-E's Technical Products Operation at Syracuse, N. Y., part of the Communications Products Dept.

Bruce Botway was appointed district sales manager, Embassy Steel Products, Inc., Brooklyn 8, N. Y. He has been with the company for three years as a factory sales engineer and will now contact customers to solve sales and service problems.

James H. Binger, vice-president, Minneapolis - Honeywell Regulator Co., has been elected to the company's board of directors. As vice-president, he manages Honeywell's Temperature Controls Group, including factories in Minneapolis, Chicago, Wabash, Ind. and Los Angeles. He has been with Honeywell since 1943 in a variety of administrative assignments.

Frank P. Scully, Sr., Scully Signal Co., Melrose, Mass., was one of 11 men who received an American Success Story Award recently from the Free Enterprise Awards Association, Inc. Talbot T. Speer, Maryland magazine and newspaper publisher and association presentation officer, made the awards to the men "whose up-from-the-ranks careers symbolize the rewards of success possible under the U. S. competitive free enterprise democracy." Scully was cited for his inventions which "helped make automatic delivery possible in petroleum marketing," including VENT-ALARM tank fill signal.

Frank W. Owen has become district sales manager, Stewart-Warner Corp., Heating and Air Conditioning Div., Lebanon, Ind., to cover southern Illinois, western Kentucky, western Tennessee and southeast Missouri. He succeeds *Bryan Ridley*, transferred to another territory. Owen is a veteran of 20 years' experience, having started with Winkler heating equipment in 1939; he had been a partner with his brother in National Heating & Plbg. Co., Carbondale, Ill.

Johannes Kuhland, senior salesman, Renick & Mahoney, Inc., New York, N. Y., retired on July 15. He started with the oil equipment distributor in 1931, a few years after it was founded, and has since been representing the firm in New Jersey and Pennsylvania. Kuhland has said he expects to continue to attend meetings and conventions to maintain contact with his friends in the industry.

James R. Hillin has been appointed field sales engineer, White-Rodgers Co., St. Louis, Mo. He will be stationed in the Atlanta, Ga., sales office to handle sales and application of the complete line of heating, refrigeration and airconditioning controls in Georgia, Florida, North and South Carolina.

YOU SELL MORE BECAUSE...
YOU HAVE MORE TO SELL

WITH THE JOHN WOOD FULL LINE

plus

HEATING

EQUIPMENT

John Wood helps you expand your business by selling the complete heating package – both house heating and water heating. You can supply the right furnace and water heater combination for every home heating need. You get the big economies of one source buying backed by John Wood's nationally-known reputation for quality.

JOHN WOOD COMPANY

Heater and Tank Division

Conshohocken, Pennsylvania • Chicago, Illinois

QUALITY PRODUCTS JOHN WOOD SINCE 1857

Now it's EVER-TITE for nozzles!

for rugged service in fueling operations

The new EVER-TITE DUAL-POPPETED FUEL NOZZLE
with controlled speed

Fine engineering—best materials
■
For gasoline and oil service
●
Easy shut off
■
Aluminum construction
■
Rigid or flexible tubes
●

All parts are completely interchangeable with parts of other "190" nozzles on the market.

Order from your Ever-Tite distributor.

EVER-TITE COUPLING CO. INC.
254 W. 54 St., New York 19, N. Y.

Lester Conley has been appointed district sales manager for New England, except the Connecticut and New York areas, for Time Saving Fills, Inc., York, Pa. He has been with Goodling Electric Co., Fuel Oil Division, York, Pa., an affiliated company, for a number of years and most recently was on loan to Time Saving Fills to develop and test fast filling methods.

The Bill Deblers, Needham 92, Mass., on August 12 became manufacturers' representatives in the six New England sales for Field draft controls, according to an announcement from Harry J. Potter, manager of sales, Field Control Div., Mendota, Ill. Concurrent with the appointment, Field inaugurated special shipping schedules to meet delivery requirements in the area.

J. W. Hosler has been appointed marketing manager for the Kewanee and Nesbitt product lines, American-Standard Industrial Division. He has been marketing manager of all air-conditioning products and replacing him in this position is *R. A. Loebl*.

James A. Rodgers, Jr., has been named manager, Technical Sales Division, White-Rodgers Co., St. Louis, Mo. He will be in charge of new product specification planning for future products approaching development stage. In addition, his division coordinates and distributes technical product information used by the company's field sales organization and acts in a product advisory capacity to top management.

Another company appointment concerns *Edward A. Fehlbaum* now manager of European operations.

(*Please turn to page 154*)

Tattle • D O T • Tale
TRADEMARK

OIL TANK GAUGE

★ **DESIGNED FOR PERFORMANCE**
★ **MANUFACTURED FOR QUALITY**
★ **PRICED FOR VOLUME SALES**

Better 7 WAYS
1 An easy-to-read scale that is plainly visible in even the darkest places.
2 All-weather plastic top and guaranteed overall rugged construction.
3 Designed and engineered for inside or outside installation.
4 Heavy die-cast plug.
5 SPRING STEEL flexible float rod.
6 All moving parts hinged on durable BRASS pivots.
7 No maintenance, repair or regulation after installation.
for 1½" and 2" OPENINGS
Dot 7-C®

homeward Products Inc.

3420 S. W. 9th St.
DES MOINES, IOWA

Mr. Dealer
Stock this fast-selling gauge with many exclusive features not found in higher priced gauges.

WRITE TODAY FOR OUR LOW PRICES AND SAMPLE GAUGE

NEW!

THE NEW CONCEPT IN HOME HEATING OIL
THAT WILL GIVE YOU FULL VALUE FOR EVERY DOLLAR YOU SPEND!

the whole story next month...

THERMOSTATS A room thermostat tells a whole lot about the system it controls. It's the only visible proof of quality. And if your system is General Controls equipped, you're telling your customer it's quality-built... efficient, reliable for years to come.

BE QUALITY SURE... ALWAYS SPECIFY GENERAL CONTROLS

GENERAL CONTROLS

Automatic Controls for Product or Process
Glendale, Calif. • Skokie, Ill. • Guelph, Ontario, Canada
Eight plants—42 factory branch offices
serving the U. S., Canada and Western Europe

T-190 DECOR... the freshest touch yet in room thermostats. And this dependable mercury switch thermostat can be color-styled to blend with paint, paper or fabric.

Popular T-99 middle line thermostat features mercury switch dependability and clean modern styling.

T-241 air conditioning mercury switch thermostat with automatic switchover for one-spot control of heating and cooling.

T-270 TEMPOTHERM electric clock thermostat for perfect day and night heating control the year round. Also available Model T-271 for heating and cooling.

T-265 THERMOSTAT... nite set back and automatic morning pickup by simply setting timer knob. Two-wire circuit... no extra transformer electrical connections.

Oilheating & Airconditioning
MERCHANDISING NEWS

2 West 45th Street New York 36, N. Y.

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August 18, 1959
No. 380

Monthly oilheating Trends

JULY INSTALLATIONS of domestic oilheating equipment are estimated at 49,299 or 16% above the revised figure of 42,624 in the same month last year. The factory shipments as you'll notice in that table on this page are running ahead even stronger although, of course, they only go through May. There is some element here of inventory building before the steel strike.

For the first seven months of the year, total installations are estimated at 298,573 compared 260,119 for a rise of 15%. The July installations were divided: New homes, 17,814; Replacements of old oilheating, 12,871; and Conversions from other fuels, 18,614.

For the entire seven months we find: New Homes, 103,572 this year compared with 90,490 in the same period of 1958; Replacement of old oilheating, 106,388 vs. 80,231; Conversions from other fuels, 88,613 in 1959 and 89,398 last year. Notice that new home sales are up 14%; replacement sales are up 33% while conversion sales are down 1%.

Central airconditioning installations by oilheating dealers in July are estimated at 5,840. These dealers also during the month sold 2,449 water heaters with mechanical burners.

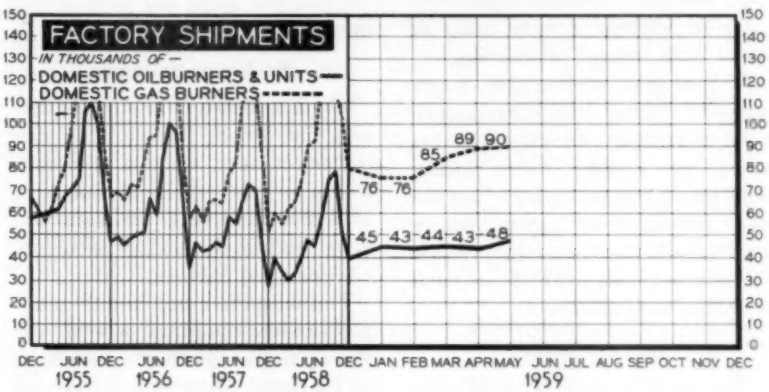
Oilheating Stocks: At the close of July, dealers were holding approximately 82,740 domestic oilburners and units compared with 60,131 a month earlier and with 85,699 on the same date last year.

The current stocks were divided: Separate burners, 37,233; Boiler-burner units, 19,030 and Furnace burner units, 26,477.

Factory stocks at the end of May, the latest available data, were 53,835 compared with 51,487 the previous year.

Tank Stocks: Perhaps it is time again to note that we regularly carry tank stocks not because they specifically interest the industry as a whole but rather because they are an item easy to count for reporting and they pretty well reflect the dealer's attitude toward inventory accumulation.

At the end of July, dealers were holding approximately 49,925 customer oil tanks compared with 47,728 a month earlier and with 34,780 a year earlier. Quite obviously, the steel strike caused a build-up since tank prices are very sensitive to supply and demand conditions.



July Minimum Retail Prices: Key Dealers

	July Avg.	June Avg.
Separate Burners	$315	$315
Boiler Burners	737	733
Furnace Burners	616	613

Price Index: Separate Burners 1947-49 is 100%

WHOLESALE

July	95.5	Six Months ago	94.5
June	95.6	Year ago	96.3

RETAIL

July	91.7	Six Months Ago	92.5
June	92.2	Year ago	92.1

Shipments of Oilburners and Units

Adjusted to include manufacturers other than those reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	MAY			FIVE MONTHS		
	1959	1958	Percent Change*	1959	1958	Percent Change*
Separate Burners	33,091	28,352	+16.7	159,987	116,890	+36.8
Boiler Units	3,005	2,015	+49.1	14,230	12,814	+11.1
Furnace Units	11,455	10,234	+11.9	50,932	47,178	+ 8.0
All Domestic	47,551	40,601	+17.1	225,149	176,882	+27.3
Commercial	4,186	2,388	+75.3	15,355	12,249	+25.4
Total	51,737	42,989	+20.3	240,504	189,131	+27.2

*The 1959 figures are not directly comparable to 1958 since the Census Bureau has changed its base from which total shipments are estimated by them.

Where do fueloil Distributors find new Customers to build Volume?

AT THE REQUEST of one of our most consistent reporting dealers, we based our special study this month on methods of prospecting for new business. We're thinking of new business in the sense of adding fueloil customers.

As would be expected the largest single source of new fueloil accounts is the sale and installation of new oilheating equipment. The weighted average for the entire group shows that 31% of their new accounts in the past heating season came through new equipment installations. The second most important source, rating 24% of the total, is direct personal solicitation of fueloil accounts. Here we have in mind both the door-to-door canvass and the salesman talking with friends or business connections . . . or whatever activity could be called "cold turkey" prospecting.

In third place, we find 18% of new accounts coming from recommendations of existing customers. This has always been a prolific source particularly among companies with "use the user" training. Fourth in importance are the leads directly traceable to advertising responses and these are rated at 13% of total sales.

Service Leads

Another 6% of new accounts come through the activities of the companies' service departments. This may refer to bulk mailings having to do with service contracts or summer cleanups or again it may be a prospect calling for service because his original oil supplier had no service department. In any event, the service department is credited with 6% of the new fuel-oil business.

In sixth position of importance and accounting for 5% of new business are the leads from salesmen or installation men in other lines that have frequent contact with consumers and particularly at times when they are changing their location. These sources would include real estate men, who know when folks are moving; milkmen operating routes; telephone or electric employees making connections for new users.

After checking on those six principal sources of new business there are a number of miscellaneous sources. For example, telephone canvassing resulted in a little over 1% of the new business that came in to the reporting group, Welcome Wagon efforts brought about two-thirds of 1%. The small remainder was from many sources, such as checking the town hall for warranty deeds and working with other heating companies.

Exclusive Salesmen

On that portion of new fueloil business that comes directly from new equipment sales, we find that quite a few of the reporting companies, 35% by count, have salesmen that work exclusively selling oilburners, oil boilers and furnaces.

Following this a step further, nearly half of these companies or 45%, pay this equipment salesman a commission on the fueloil volume that is generated by his new equipment sales. This is a happy circumstance for the man because he not only concentrates his energy on extolling the delights of oil heat and his special variety, but also his income is greatly expanded by the fuel demand.

The commission basis on fueloil for the equipment salesman ranges all the way from 1/20th cent a gallon to ½ cent a gallon depending largely on whether the man is paid only for the first year or if he is paid for as long as the account is held. However, quite a few companies do pay a straight half cent as long as the account is held providing the salesman continues his connection with the company.

Another basis of fueloil commission is, of course, a straight cash bonus paid only once. These range from $5 to $15, more often $10. This flat fee basis is most prevelant in the Midwest. Occasionally the company will pay the salesman a strong first year commission on feuloil and a smaller commission on later years. The object here is to keep the man pushing equipment sales rather than spending his time visiting his old fueloil accounts.

The dealers were asked if they have good success in getting equipment salesmen to work on a commission basis. Just under a fourth of them say that this is not a problem and that they can get good ones, but the others find it quite difficult, although obviously not impossible, because they do get them after enough effort.

Satisfied Customers

Now we come to a couple of very important disclosures . . . 98% of the companies say that in their experience they get more permanent and satisfied oil accounts among those customers who buy their oilheating equipment.

According to 91% of the dealers these same customers give less trouble when a competitor in town offers a cut-price on fueloil. In other words, when the equipment is sold and installed by the fueloil dealer, it provides an oil account that outlasts the others and an account that is harder to lure away on a pure price deal.

Our final questions this month were on the general attitudes toward oilheating equipment sales. As we have noted on the first page of this report, sales are running 15% ahead of last year and we find that nearly two-thirds of the dealers are more optimistic about the future of oilheating for the next year or two.

Related to this we asked how the cooperative programs throughout the nation were helping sales. Across the board, 84% of the dealers, both in areas where there are programs and

where there are not, feel that the programs are helping the industry stimulate oilheating equipment sales.

Some interesting comments on prospecting for sales are these:

"A good advertising program is the answer to many oil ills." . . . "We are trying to start a cooperative program in our area and feel that it would greatly benefit oil in this section." . . . "We are just getting started with a cooperative program through our new association." . . .

"Our area is a painfully cheap gas market." . . . "Oil dealers must install top quality heating, but make it pay and not subsidize with oil sales." . . . "It is hard to see a direct addition to sales because of the cooperative programs, but it certainly is good public relations." . . .

"Oilheating seems to be on the wane; the trend is towards more gas, among oil people more giveaways and gimmicks." . . . "The cooperative advertising is vital to survival." . . . "The price of fueloil will be a determining factor in sales volume in the years ahead." . . .

"Moving companies are an excellent source for getting a list of fueloil leads, also oilburner permits in town." . . . "Our best prospects come from the customers that we satisfy today; so every day is today—here's for more satisfied customers." . . . "Homeowners in gas projects are beginning to express their dissatisfaction with gas."

Oilburner Permits*

JULY 1959		7 MONTHS 1958	1959
1	Albany, N. Y.	13	6
25	Baltimore, Md.	184	152
32	Bridgeport, Conn.	364	310
346	Brooklyn-Queens	2,938	2,620
1	Columbus, Ohio	13	48
12	Detroit, Mich.	200	195
55	Elizabeth, N. J.	184	199
2	Freeport, N. Y.	76	89
..	Hartford, Conn.	387	..
21	Irvington, N. J.	77	120
..	Meriden, Conn.	193	..
40	Milwaukee, Wis.	264	147
..	Minneapolis, Minn.	104	..
13	Montclair, N. J.	62	57
1	Morristown, N. J.	..	11
21	Mt. Vernon, N. Y.	226	201
..	Newark, N. J.	360	..
65	New Bedford, Mass.	337	312
35	New Haven, Conn.	109	364
..	New Rochelle, N. Y.	71	..
8	Norfolk, Va.	144	131
..	Omaha, Neb.	28	..
6	Orange, N. J.	45	20
8	Passaic, N. J.	34	32
22	Paterson, N. J.	112	116
93	Philadelphia, Pa.**	670	588
46	Portland, Me.	232	258
100	Portland, Ore.	1,012	578
..	Poughkeepsie, N. Y.	42	..
28	Providence, R. I.	204	205
40	Richmond, Va.	176	225
73	Roanoke, Va.	550	372
43	Rochester, N. Y.	271	273
2	Rockville Centre, N. Y.	23	20
14	Salem, Mass.	150	153
43	St. Louis, Mo.	702	279
2	St. Paul, Minn.	32	38
5	Schenectady, N. Y.	23	40
..	Spokane, Wash.	127	..
84	Springfield, Mass.	251	364
16	Stamford, Conn.	77	107
41	Washington, D. C.	216	169
10	White Plains, N. Y.	82	78
16	Wilmington, Del.	94	73
52	Worcester, Mass.	352	410
7	Yonkers, N. Y.	106	77
	Totals	10,605	9,426
	Percent Change		—11.2

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax.

**Courtesy of "Philadelphia Inquirer."

June construction Contracts contribute to 6-months' High

JUNE construction contract awards, reported by F. W. Dodge Corp., rose sharply over May, but were under the June 1958 figure—which was the highest month ever recorded. At the same time, Dodge reported that construction contracts in the first half of 1959 set a new all-time record for the period, with large increases in residential and non-residential building offsetting declines in heavy engineering.

The Dodge Index of total contracts reached 288 in June, compared with 259 in May; dollar value in June was $3.7 billion, down 4% from June 1958. However, the decline of 4% is considered negligible since the June 1958 high resulted from government stimulation of housing and highways as an anti-recession measure.

Manufacturing building category in June was up 89% from June 1958; apartment buildings were up 46%, one and two-family houses up 30% and commercial buildings 24% better. Heavy engineering categories were down 43% in June.

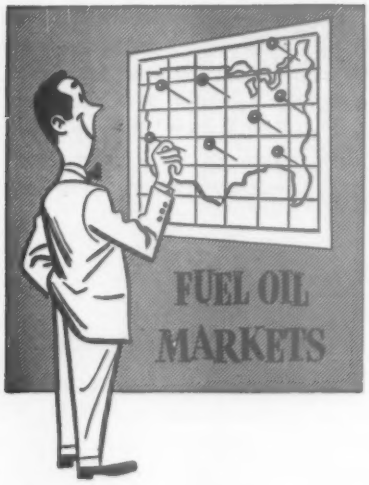
Cumulative figures for the first half of 1959, with percentage changes from the same period last year, are: Non-residential buildings, $5.7 billion up 4%; residential, $8.9 billion up 37%; heavy engineering, $4.3 billion down 11%; total construction, $18.9 up 12%.

Where is the

New home Market?

	No. of Permits Issued May	5 Mos.
Alabama	2,664	9,252
Arizona	2,098	11,684
Arkansas	236	1,643
California	24,416	103,365
Colorado	1,376	5,887
Connecticut	1,909	6,835
Delaware	221	701
District of Columbia	58	412
Florida	6,532	33,979
Georgia	1,917	8,741
Idaho	188	804
Illinois	5,981	22,765
Indiana	1,510	5,706
Iowa	652	3,065
Kansas	827	3,924
Kentucky	758	3,784
Louisiana	1,342	6,872
Maine	154	369
Maryland	2,836	12,109
Massachusetts	2,445	7,739
Michigan	3,622	15,061
Minnesota	1,895	7,074
Mississippi	263	1,468
Missouri	1,747	15,384
Montana	211	746
Nebraska	771	2,979
Nevada	387	1,633
New Hampshire	191	680
New Jersey	3,343	13,712
New Mexico	754	4,244
New York	9,464	44,881
North Carolina	1,175	5,744
North Dakota	267	717
Ohio	5,557	20,646
Oklahoma	975	4,542
Oregon	796	3,442
Pennsylvania	3,271	16,165
Rhode Island	226	1,016
South Carolina	390	2,039
South Dakota	175	735
Tennessee	1,395	6,982
Texas	6,253	34,863
Utah	876	3,228
Vermont	21	74
Virginia	2,715	11,268
Washington	3,093	10,580
West Virginia	446	1,638
Wisconsin	2,150	7,648
Wyoming	144	533

Greater detail on permits within the individual states is included in a booklet, "New Dwelling Units authorized by local Building Permits," issued monthly by the Bureau of Labor Statistics, U.S. Dept. of Labor, Washington 25, D. C.



THE INDUSTRY'S stock picture is hurting the market again, and causing even deeper cuts than we had in August last year. When we say that it is hurting the market the implications are somewhat varied.

It is fine for the consumers who would be getting a tank filled right at this time. It is also fine for the fueloil distributor who has at least as good margin in the new price range as he had before. It is not so good for the refiner for he has progressively looked upon fueloil as a leading profit product. The worst result of prices as low as the table shows will be in the industry reaction this fall when the prices go back up to more realistic levels.

We've almost come to expect a price swing as wide as 2¢ per gallon between the summer low point and the winter high which is decidedly unhealthy, but as long as our industry stays on a free economy basis there is nothing that anyone can do about it.

And who would want it different?

The seasonal price fluctuation is shown very dramatically in the new chart of fuel price indexes. Study this chart a moment and it becomes quite interesting. Both gas and oil as fuels have risen considerably more than the cost of living index since the base period of 1947-1949.

On the other hand the Federal Reserve index of petroleum products wholesale (which has been charted in previous months) has been substantially below the cost of living index since January 1957. This shows that the principal change in fueloil economy over the past ten years has been an improvement in the margin or marketing allowance between the wholesale and retail indexes.

Of course, the new chart shows electricity with very little change from the BLS base period.

The primary stock table shows supplies 16% above a year ago, which is excessive but hard to control by individual refiners.

No. 2 Heating Oil (Including No. 3 & PS200)

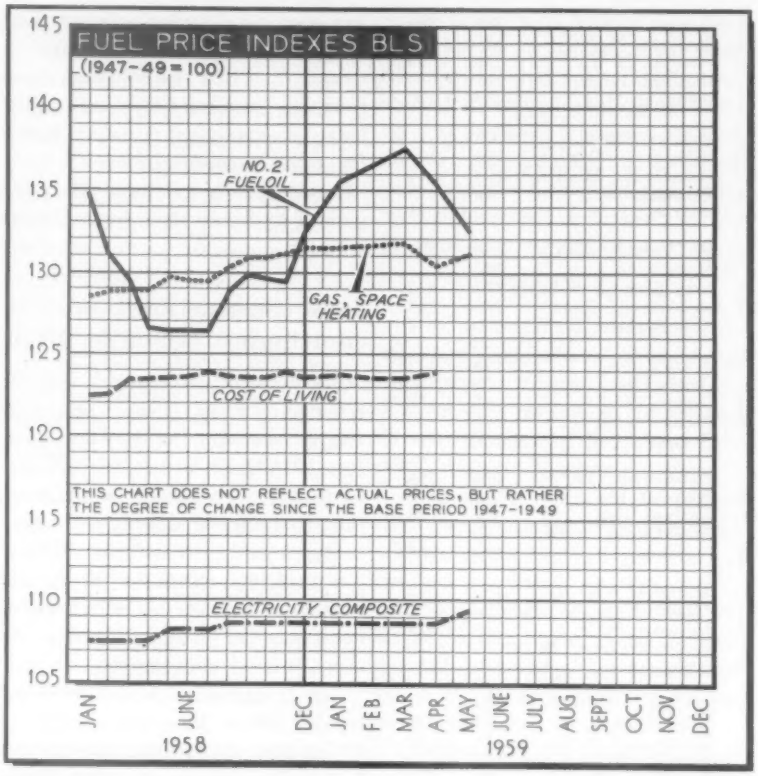
Price per gallon as of August 10, 1959

	Tank Car†	Tank Wagon		Tank Car†	Tank Wagon
Portland, Me.	10.0(A)	14.6	Charleston, S. C.	10.1(A)	13.3
Boston	9.9(A)	14.4	Chicago	9.75*	14.1
Providence	9.9	14.1	Detroit	10.5*	15.1
Hartford	10.15(A)	14.2	Cleveland	10.6*	14.6
New Haven	9.8(A)	14.3	Minneapolis	9.929	14.2
Syracuse	10.6	14.6	St. Louis	10.1*	14.9
Albany	9.5	14.0	Indianapolis	10.39*	14.9
New York	9.8(A)	13.7	Milwaukee	10.75*	14.9
Newark	9.8(A)	13.8	Des Moines	10.55	14.7
Philadelphia	9.8(A)	13.9	San Francisco	12.05*	14.8
Baltimore	9.8(A)	14.1	Portland, Ore.	12.1*	15.1
Wilmington, N. C.	10.1(A)	13.7	Seattle	12.2*	15.2
Washington	10.1(A)	14.4	Spokane	13.8*	16.8
Richmond	10.2(A)	13.8	Los Angeles	11.55*	14.3

Tank Wagon prices shown are for maximum one-time delivery discounts.
*Delivered.

(A) .50¢ voluntary allowance.

†Tank car prices are typically those paid by fueloil distributors as a purchase price. On the West coast, this term more often indicates a retail sale to a large commercial account. This is often a half cent below tank wagon price.



Distillate Fueloils

PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	Aug. 14 1959	Aug. 15 1958
East Coast	57,897	45,927
Midwest	43,189	43,702
Gulf Coast	29,599	22,625
Total	130,685	112,254

*American Petroleum Institute

HARTOL

INTO THE SWING...

As you swing into another new heating season you'll find the top scoring asset is your own hard won "know how" about the fuel oil business—all the way from your supplier's tanks down to the nozzle on a customer's burner. There's just no substitute for experience! That's why for over three decades top independents have teamed up with HARTOL's experience and facilities to help them gallop away from competition. HARTOL provides 16 convenient, modern terminals, storage for peak operation, and dependability under *all* conditions. Get the greatest service story in the entire industry from your HARTOL representative.

- Largest independent marketer of gasoline and fuel oil on the Eastern Seaboard.
- First in experience . . . cooperation with independent jobbers and dealers . . . ability to serve.

HEATING OILS • GASOLINE • KEROSENE

HARTOL PETROLEUM CORPORATION
630 FIFTH AVENUE • NEW YORK 20, NEW YORK

● A size to meet every requirement. Uses pressure burner, number 2 oil and sells at popular prices. Has every feature for volume sales.
Made in large commercial sizes for schools, hotels, hospitals and public buildings. Approved for 180 degree outlet water.
Details on request.

Bock Corporation
110 S. DICKINSON ST., MADISON 4, WIS.

OHI's supermarket sack Promotion has Distribution of over 10 Million

DISTRIBUTION in excess of 10 million already has been achieved in the supermarket sack promotion available through the Oil-Heat Institute of America's Treasury of Advertising.

The promotion involves purchase of advertising space on the large checkout sacks used by supermarket chains all over the country. Distribution of the sacks is made possible by an agreement with Supermarket Affiliates, Inc. The service is available to OHI Chapters and individual oil heat marketers.

Space in units of 300,000 sacks—the minimum order—costs $660 per unit. Supermarket Affiliates prints and distributes the sacks and also recommends the number of units required to saturate a given marketing area.

Copy is flexible

The OHI Treasury of Advertising has designed attractive two-color artwork for the sacks, featuring the "Better Heat with oil Heat" message. But, purchaser may substitute his own copy, if he prefers.

OHI reports that there will be concentrated and continuing distribution in the Counties of Nassau and Suffolk on Long Island, N. Y. First the Nassau-Petroleum Council has arranged distribution. Next, Paragon Oil Co., the first company to contract for the sack distribution outside of OHI Chapters, has arranged for the distribution of 1,800,000 sacks during October and a similar number in November. In addition, it is highly possible that Paragon will contract for another eight months, exclusive of December, for Nassau County only.

There not only have been firm contracts signed in other areas, but there are enough inquiries and expressions of intentions to indicate that the sack promotion probably will achieve a total of better than 15 million within a very short time.

The Institute is planning to announce shortly availability of shopping bags, which OHI would sell to individual dealers with his imprint. This

is strictly an Institute project. First order placed for the bags was received from the Fuel Oil Council of Western Massachusetts; it calls for 50,000 for distribution during the Eastern States Exposition in Springfield. (See page 81.)

Complete information about both promotions can be secured from Oil-Heat Institute of America, 500 5th Ave., New York 36, N. Y.

NFPA issues new Edition of oilburner Regulations

NFPA NO. 31, "Standard for the Installation of oilburning Equipment," has been published in a revised edition by the National Fire Protection Association.

The 1959 edition of the standard incorporates 24 changes revising and clarifying the previous edition. The standard, while advisory, is used widely as a basis of law and regulation throughout the United States and Canada. It covers the use and installation of equipment from home portable oil heaters to commercial and industrial oilburners.

Copies are available from NFPA, 60 Batterymarch St., Boston 10, Mass. Price is 60¢ a copy.

If you design, specify, install or service heating equipment you will find these technical brochures on the control of draft an important aid.

May we send you copies?

Handbook and Installation Guide

FIELD CONTROL DIVISION

H. D. Conkey & Company — Mendota, Illinois

AFFILIATES

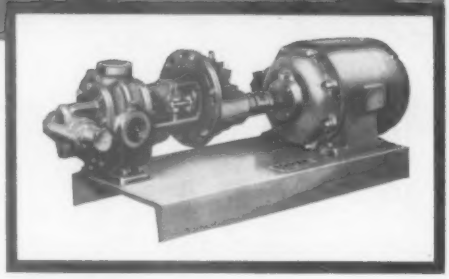
Conco Building Products, Inc. — Brick, Tile, Stone
Conco Materials Handling Division — Cranes, Hoists
Spartan Tool Division — Sewer Cleaning Equipment

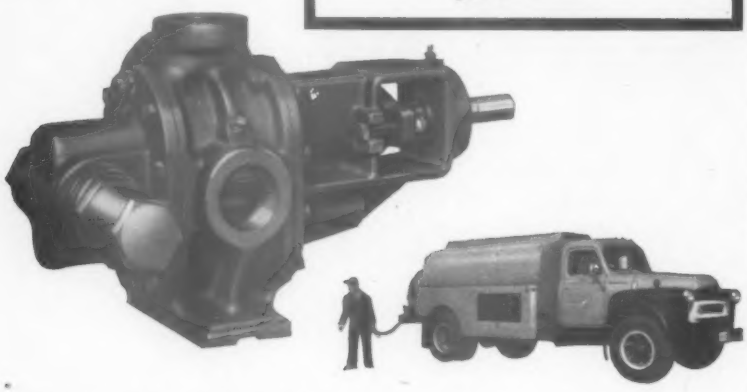
Specification Guide

ROPER HELPS CUT OPERATING COSTS All Along the Way!

BULK PLANTS AND TERMINALS

Roper Series 3600 Pumps mounted on steel bedplates are compact units that require minimum installation space. The interchangeable gear reductions provide for 3 pumping speeds. Furnished with or ready to receive standard NEMA motor. No pump house needed.





TANK TRUCK DELIVERY Roper Series 3600 Truck Pumps are quiet, smooth-running units that enable fast, safe deliveries. Thus — more calls per day . . . more profit per week. All along the line — from bulk plant to home delivery — you can rely on dependable Ropers to help step up efficiency and cut down operating costs.

- Furnished in hi- and lo-drive design
- Alloy iron gears promote long life
- Heavy-duty high lead bronze bearings
- With or without adjustable relief valve
- Operates equally well in either direction

Roper Hydraulics, Inc.
769 Blackhawk Park Avenue
Rockford, Illinois

ROPER
ROTARY PUMPS

NFC fact Booklet discusses Accidents to heating Plants

A BOOKLET, "Facts about heating plant Accidents and Oil," has been prepared by the National Fueloil Council to acquaint interested persons with factual information about oilheating and thus prevent erroneous information from being published or broadcast about heating plant accidents.

Earlier this year NFC prepared a manual on the subject for the use of local dealers or organizations. It actually is a guide for action, containing detailed instructions about what to do if oil is involved in a heating plant accident. The newly-announced booklet, on the other hand, is an information piece designed for wide distribution.

The manual is to be studied by the dealer and referred to when needed; the booklet is to be circulated among company associates and copies provided for local newspaper, radio and TV news editors and for representatives of the national wire services. Also, the dealer or local organization is urged to see that appropriate personnel in the fire department receive copies.

An introductory note in the booklet explains that, "It was prepared to supply information for those who report on heating plant accidents and to encourage officials to make full statements which will clarify the position of oil when it is connected with a heating plant accident."

Copies can be secured from the National Fueloil Council, 424 Madison Ave., New York 17, N. Y.

Aurora Gasoline acquired by The Ohio Oil Company

ACQUISITION of the capital stock of Aurora Gasoline Co. by The Ohio Oil Co., Findlay, Ohio, in exchange for 874,422 shares of its own common stock has been announced. Aurora thus becomes a wholly-owned subsidiary of Ohio Oil.

Aurora operates refineries at Detroit, Muskegon and Elsie, Mich.; Ohio Oil has operations in all branches of the petroleum industry.

BUSINESS IS BETTER WHEN YOU DO BUSINESS WITH COASTAL

OIL
COASTAL
COMPANY

COASTAL OIL COMPANY

Now, More Than Ever Coastal Does The Most For Fuel Oil Dealers

EXECUTIVE OFFICES: 744 BROAD ST., NEWARK 2, N. J.

DELAVAN

type "W" nozzle takes the guess-work out of nozzle selection

Delavan's Type "W" is truly the industry's only *all purpose* nozzle. No need to worry about hollow or solid cone in the small burners (.50 through 1.35 GPH). You can replace either pattern with improved fires on most jobs.

Remember, Type "W" is a premium nozzle designed especially for small burners where nozzle performance is most critical.

Try an assortment of "W's" today. You'll find them to be a time-saver on your regular service work and ideal for trouble-shooting or for those fussy jobs.

From the world's largest nozzle manufacturer Delavan is the largest manufacturer devoted exclusively to the design and production of nozzles. Another reason why Delavan nozzles are your best assurance of quality and performance.

Ask your jobber, or write for free literature.

DELAVAN Manufacturing Company

WORLD'S LARGEST MANUFACTURER OF NOZZLES • WEST DES MOINES • IOWA

Canadian Representative
Ontor, Ltd.
12 Leswyn Road
P.O. Box 608, Station T
Toronto 10, Ontario, Canada

Graph solves Problems of fuel operating Cost

A COMPARATIVE FUEL COST GRAPH has been developed by Clifford H. Olson, Automatic Heating Company, Fargo, N. D., in collaboration with Vern D. Peterson, assistant professor, Mechanical Engineering, North Dakota State College. The application of the graph can simply and rapidly solve many of the problems involving fuel operating cost, such as the following:

What does It tell?

1. How much can be saved in operating costs by converting to a different fuel?
2. How much would the improved efficiency of a complete new installation save in operating costs?
3. What is the most economical fuel for heating hot water?
4. How does heavy oil compare with coal or gas for a large installation?
5. What effect does high Btu content have on operational savings?
6. In a combination oil and gas fired unit, at what price would it be economically practicable to switch from one fuel to the other?
7. Pounds of steam per dollar.

Another application feature of the graph is that it shows the relative competitive situation of the most common fuels. A salesman familiar with the use of the graph can use it as a sales tool. Since many prospects are interested in operating costs, particularly in larger installations, the chart can be used as a graphic representation of the savings to be realized.

Calculation is quick

In selling equipment it often is necessary to calculate boiler efficiencies, combustion efficiency, and varying costs of fuels. It is usually a lengthy complicated procedure. This graph furnishes a quick answer.

Industry is constantly looking for cheaper fuels. In the small to medium sized plants petroleum products seems to have the most to offer in the way of first cost, fewer operating personnel and the ability to make the equipment fully automatic.

To find the cheapest fuel available it's necessary to know which fuel

Factory Assembled and Wired Upflow Winter Air Conditioners — compact in Design, Substantial in Construction — for Basement, Closet or Utility Room Installation—Approved for Close Clearances—Adaptable for Cooling — Gas and Oil Fired Complete Line!

Horizontal Furnaces — Low and Compact for Limited-Space Installations — Complete Line of Gas and Oil Fired Models!

PREMIUM Design, Construction and Performance . . . sound reasons why Moncrief has been satisfying customers since 1895.

For more than 60 years, Moncrief has kept faith with Furnaces and Air Conditioners that incorporate design achievements and manufacturing experience, gained by concentrating on excellence . . . making today's Moncrief Units sturdier and more trouble-free than ever.

To offer this kind of satisfaction to your customers will cost you nothing, and can be exceptionally profitable!

DEALERS with a FUTURE are BUILDING *SATISFACTION* with MONCRIEF

Counterflow Winter Air Conditioners — Heavily Constructed, Compactly Designed — Approved for Close Clearances — Gas Fired and Oil Fired!

Basement Type Winter Air Conditioners — Attractive Console Cabinets — Designed to Burn either Gas or Oil — Available in Assembled and Wired Oil Models!

COMPETITIVE Pricing, with prompt service from your wholesaler . . . sensible selling practices have placed Moncrief in the forefront among the largest selling complete lines.

Moncrief leads with competitive pricing because Moncrief's high rate of sales permits cost-reducing manufacturing practices that make really competitive prices possible.

So, if you want to build satisfaction, while realizing more satisfactory profits, call your Moncrief Wholesaler, now!

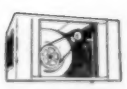
Underwriters' Listed Air Cooled Condensing Units — 2, 3 or 5 H.P. Capacities

Winter Air Conditioner — Upflow Type, with Plenum Evaporator Coil

Winter Air Conditioner — Basement Type, with Plenum Evaporator Coil

Winter Air Conditioner — Counterflow Type, with Counterflow Evaporator Coil

Horizontal Furnace — with Duct Type Evaporator Coil



Blower-Coil Unit — Compact Air Handling Combination

Gas Unit Heater — 5 Models

Conversion Gas Burner

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

• for tank truck

• faster delivery

• less maintenance

• greater safety with

ardmore

• for tractor-trailer

HYDRAULIC DRIVE SYSTEMS

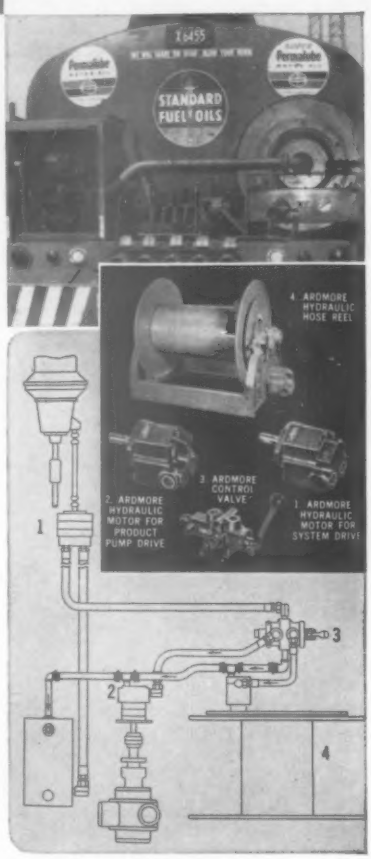
U.S. Patent No. 2,816,767

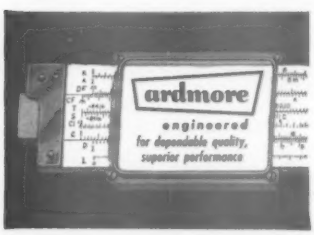
for product pump and hose reel drive

For every type of carrier from single or dual product delivery trucks to tractor-trailer transports, you'll find Ardmore Hydraulic Drive Systems offer tremendous advantages. Hundreds of new installations each year plus the continuing trouble-free years of service of earlier installations, prove what Ardmore equipment can do for you. For any product pump, delivered capacity is increased as much as 30%. Components such as product pump or meter are more ideally positioned for easier reel-compartment accessibility in operation and maintenance. Hydraulic hose reel drive gives maximum safety. Overall installation is easier since flexible hose replaces rigid piping and pipe fittings.

ARDMORE IS A PATENTED SYSTEM
The Ardmore design is exclusive. Only Ardmore can give you Ardmore performance features.

GUARANTEED FOR PERFORMANCE
100% guaranteed for performance as specified, providing the system contains all Ardmore components. Your inquiry for complete information is cordially invited.





ARDMORE PRODUCTS

1831 Shermer Road • Northbrook, Illinois
Eastern Office: 612 Commerce Road, Linden, N.J.
International Sales and Service

gives the most heat units (Btu's) per dollar. The graph uses Btu's per 1¢ as a basis to compare one fuel with another.

Placing a straight edge vertically on the graph, the user can start at the top with natural gas and compare all fuels given in their most common unit costs. Natural gas cents per thousand cu. ft., LP gas cents per gal., oil cents per gal., coal dollars per ton and electricity cents per kwh.

By drawing three straight adjoining lines on the graph it is possible to compare two fuels without calculation, involving six variables, two different Btu contents, two different combustion efficiencies and two different fuel prices.

Instructions and 10 examples showing different uses are sent with each graph. Many other uses can be worked up, for example, a plant operator having a dual burner can quickly determine which fuel is the cheaper to use. Even though the price of each fuel changes or his plant efficiencies change with demand load, he can still compare costs of operation without having to calculate.

Copies of the graph are available for $1 each from Automatic Heating Co., 1107 Fourth Avenue North, Fargo, N. D.

27 Liquifuels Dealers win Trips to Bermuda

A DEALER SALES CONTEST, held by Liquifuels Ltd., Toronto, Canada, awarded prize points to dealers whose gallonage volume of stove and furnace oil sales showed an increase over the previous season. Dealers who accumulated a sufficiently high point total won a trip to Bermuda for themselves and their wives. A total of 27 dealers qualified for the trip; they were accompanied by personnel from Liquifuels.

In addition to the 27 dealers who went to Bermuda, about 75 other dealers won merchandise prizes, ranging from sporting equipment and small electrical appliances to television sets and home freezers.

Another contest being planned will have as its theme, "Liquifuels' 10th anniversary Sellabration."

oday's smallest two-way mobile radio - actual size!

New General Electric Transistorized Progress Line

General Electric's new Transistorized Progress Line will fit in more places, in more different positions, than any other two-way mobile radio you can buy today.

Not only is this the world's smallest, lightest commercial two-way mobile radio, but standby battery drain is so low you need never turn off your TPL mobile unit, just like the clock in your car. You install no special generator, use less gas, require fewer engine jobs.

TPL is the first two-way radio that transmits up to 75 watts of power in high band . . . the first that really fits under the dash . . . the first to realize the full benefits of transistorized design (no more than four tubes) . . . the first to eliminate bulky cables through new one-piece design of receiver control and transmitter . . . the first with shielded dirt-free ventilation.

The new General Electric TPL ushers in a new era of convenience and reliability in mobile communications. Don't miss all the exciting details. Write General Electric Company, Communication Products Department, Section 4099, Mountain View Road, Lynchburg, Virginia.

GENERAL ELECTRIC

Communication Products Department

I've hit my earning stride.

...with my EXCLUSIVE

SUNHEAT FRANCHISE

"Once upon a time, I wasn't doing so hot. But let's forget about that. You're more interested in finding out why I'm riding so high now.

"The answer's easy. I'm a SUNHEAT distributor.

"It seems to me you can't go wrong when you've got all this working for you:

"Take the name Sunoco, for one thing. Everybody knows it. The Sunoco people have made sure of that with steady advertising. They've got a multimillion-dollar program going at full speed right now. It sure helps a lot, from my own experience, in selling SUNHEAT.

"SUNHEAT even supplies me with my own individual advertising program. Puts up half the cost of running it, too.

"But let's get down to SUNHEAT itself. I know it's tops. The Sunheat people tell me that it's a specially made formula . . . many different oils blended into a perfect heating fuel. It really boosts sales.

"From what I've told you, it sounds like the only thing you'd have to worry about would be other SUNHEAT distributors. But that's taken care of, too. My territory's my own—all mine for growth and profits. No tricks, no minimum gallonage either.

"What's more, Sun Oil helps you protect your profit margin.

"All in all, this SUNHEAT set-up is a darn good one. Maybe you'd like it too."

Exclusive territorial distributorships are available now in most marketing areas. Write today for information.

SUNHEAT

FUEL OIL DEPARTMENT

SUN OIL COMPANY

Philadelphia 3, Pa.

ORIGINATORS OF CUSTOM-BLENDED BLUE SUNOCO GASOLINES

Webster
ServiceSaver
Type 2R616 (2-stage)

filtering and firing up to 75 gph

WEBSTER

ServiceSavers

Here's capacity to handle all installations — from small residential to large commercial and light industrial. With Webster's expanded line of single and 2-stage **ServiceSavers,** there's a capacity for every requirement — from 7 gph to 75 gph!

And, filtering action is matched to pump ratings. Webster's exclusive rotary filter design permits multiple blade elements to meet all capacity requirements. It eliminates the need for auxiliary filters for high capacities . . . never needs cleaning.

What's more, you get all the other advantages of Webster's proven design: Greater pressures — up to 250 psi! Wider range of speeds — 1450 to 3450 rpm! Fast prime, easy mounting! And, they replace any fuel-unit now on the market.

HEATING DIVISION
WEBSTER ELECTRIC
RACINE · WIS
our 50th year

SPECIFICATIONS

capacities to 75 gph
pressures to 250 psi
speeds to 3450 rpm

Specification sheet FU-2 with full details on complete line available upon request.

Bostitch adv. A-133

Letter to the Editor

BENSON FUEL CORP.
Towson, Md.

Editor:

Here's a switch! Oil company puts in coal stove!

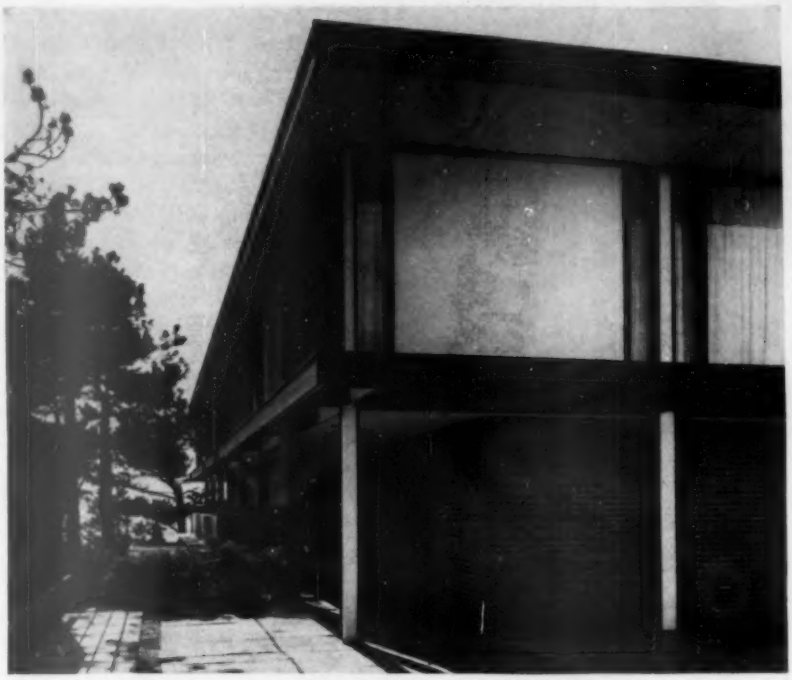
A step backward you might think, but this one is only for dressing up our reception room, and is inoperative. This old Latrobe stove was popular in the Baltimore area 50 to 100 years ago, and was the last word in heating comfort. Lots of folks had coal ranges in the kitchen, but this one was for the parlor . . . and moneyed people had them in the dining rooms and bedrooms. Anthracite coal was used. Controls consisted of a knob on the front for opening and closing the stack damper . . . and another knob for controlling a curved plate atop the furnace. This plate slid back and forth, allowing more or less heat to escape to a register on the second floor. There was one automatic feature. When the coal burned through, the fire was out automatically . . . no after fire.

Studying this old-timer, we would not be surprised to see it make a comeback. It is certainly cleaner than a fireplace, and will throw more heat because of the damper control. The stove and mantle are visible day and night through our show-windows and people are looking right over a 1959 oilburner

THE SPECIFICATIONS TELL THE STORY!

HEATING SYSTEM OF FEATURE HOUSE IS EQUIPPED THROUGHOUT WITH B&G HOT WATER SPECIALTIES

Specifications read as follows:



The Carl Murchison residence, Provincetown, Mass.

Architects: The Architects Collaborative, Cambridge, Mass. Robert S. McMillan, Partner in charge. **Engineers:** Reardon and Turner, Boston, Mass. **Contractors:** Anderson and Spinny, Inc., Hyannis, Mass.

CIRCULATING WATER PUMPS

They shall be Booster Pumps as manufactured by Bell & Gossett, Inc., or approved equal, in accordance with the following:

Designation	G.P.M.	Head	B&G No.	H. P.
No. 1	7.5	8 ft.	1¼″	1/12
No. 2	22.0	10 ft.	2″	1/6
No. 3	10.0	8 ft.	1½″	1/6

FLOW CONTROL VALVES

They shall be Type S Flo-Control Valves as manufactured by Bell & Gossett, Inc., or approved equal.

CONDENSER WATER PUMP

The condenser water circulating pump shall be integral, flange mounted, vertical type, all bronze fitted, with stainless steel shaft. The electric motor shall be of sufficient capacity to deliver 57 gpm against a total head of 70 ft.; it shall be suitable for operation at 208 volts, three-phase, 60 cycles and shall be provided with a magnetic starter having thermal overload protection. Bell & Gossett Series 1522 Pumps, bronze fitted, S.S. shaft 2″.

PRESSURE REDUCING VALVE

Furnish and install on the cold water supply to the boiler, one pressure reducing valve, No. 12, as manufactured by Bell & Gossett or approved equal.

BOILER RELIEF VALVE

Shall be Model 750, ASME Code, Relief Valve as manufactured by Bell & Gossett, Inc. or approved equal. Valve discharge connection shall be individually piped full size to 6″ above the floor.

BOILER FITTING

Provide Model ABF-2½″ Airtrol Boiler Fitting as manufactured by Bell & Gossett or approved equal.

The Carl Murchison home, Provincetown, Mass., features an array of the most modern comforts and conveniences... among them a forced hot water system completely equipped with B&G *Hydro-Flo* hot water heating specialties. In a home in which nothing but the finest equipment received consideration, the selection of B&G equipment speaks for itself.

On all the equipment specified, the B&G emblem is a warranty of quality and outstanding performance. The pumps, for example, are noted not only for long-lived dependability but for *quiet* operation. In addition, the owner has the protection of a single manufacturer's guarantee on all the specialties in the system.

Send for catalog of B&G Hydro-Flo Products and full color booklet on the B&G Hydro-Flo System

Hydro-Flo® SYSTEM

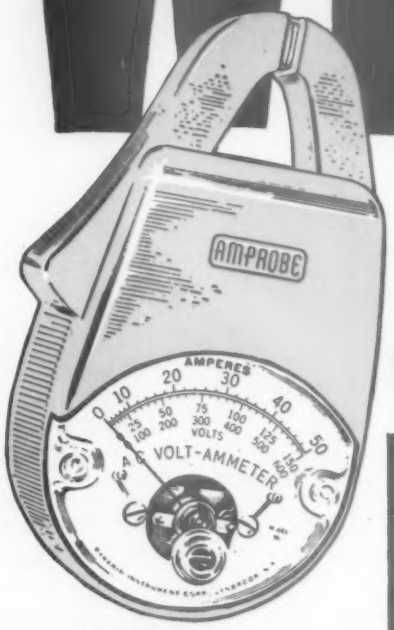
BELL & GOSSETT

COMPANY

Dept. FW-7, Morton Grove, Ill.

Canadian Licensee: S.A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

WHY settle for an ordinary voltage tester?



Ask yourself these questions	The AMPROBE Junior	ordinary voltage tester
Does it measure current as well as voltage?	YES	NO
Does it give you full visibility on a graduated reading scale?	YES	NO
Does it fit conveniently in your pocket?	YES	YES
Does it measure within ±3% accuracy?	YES	NO
Does it come in a full line of models to meet different problems?	YES	NO
Does it protect you against shorts and shocks?	YES	YES
Does it balance loads, locate grounds, determine motor overloads, check rating of circuit breakers?	YES	NO

The AMPROBE Jr. gives you so much more... not just a run-of-the-mill voltage tester but a precision-made instrument that measures voltage *and* current instantly and accurately without shutting down equipment. All this with one rugged and inexpensive pocket-size tool! And now...FOR THE FIRST TIME...at the request of utilities, industrial plants and other large-scale users of AMPROBES, the AMPROBE Jr. has gone SAFETY YELLOW to conform with standard safety practices.

PICK THE AMPROBE *YOU* NEED! There's an Amprobe for every job, every budget: from 10 amps and 250 volts to 1200 amps and 600 volts AC; from $19.85 to $67.50. And with the Amprobe RS-3, you get a volt-amp-*ohmmeter* all in one pocket-sized, snap-around precision instrument. Every Amprobe comes with test leads; most with top grain cowhide leather case at no extra cost. See the complete Amprobe line at your jobber's today.

Amprobe Jr.

snap-around volt-amp tester

$19.85

PYRAMID INSTRUMENT CORP., Lynbrook, New York

to get a look at this old unit. The new oilburner and controls in the show-window do not seem to have a chance.

Since folks are digging up and installing all kinds of old stoves in their club rooms and dens, we have had many inquiries as to price and availability of this stove. We find it hard work to convince prospects that they should replace a 25-year-old burner with a new one . . . yet they will pay most any price for a 75-year-old unit that isn't even working . . . just for decorative purposes. Can you imagine anyone 50 years from now . . . setting up a 1959 oilburner, just because they thought it looked pretty? If this is going to happen we had better design present day burners, so that they will look pretty in a club room.

If this stove does make a comeback we will have to design a club-room type of coal bin. A couple of 2 x 4's and some rough boards will not be acceptable for a coal bin as they were in the good old days.

S. M. EBERENZ

Blackie, a Whiting, Ind., refinery cat, disappeared about the time operations were shut down at this Standard of Indiana facility in July by a strike. Blackie's labor problem solved itself supervisors discovered when they were preparing to start up one of the refinery's huge furnaces. They removed Blackie and three black kittens, but she just as carefully carried the kittens back to their furnace birthplace. Now there's a seventh step added to normal furnace start-up instructions, "Remember cat and kittens in the F-1 firebox and remove before lighting furnace."

Climate by Chrysler

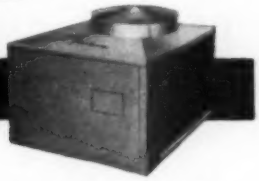
men who sell it bank bigger profits . . . all year long!

Everyone gains when you sell Chrysler residential heating and air conditioning. For customers, there are real sales features to make them happier. For you, there are special advantages that help you bank more profits on what you sell.

Take the features: In Climate by Chrysler, you'll be selling the air conditioning and heating equipment picked for the NAHB Research House in South Bend, Ind. Customer acceptance is tops . . . because you'll be offering exclusives like Chrysler's Climate-Minder Control, 3-way air purification system, and the scale-resistant stainless steel heat exchanger.

And as for profits: Since you'll be selling the most versatile line in the industry, you can depend on getting the best—and most profitable—combination for any job. With Chrysler's reputation for quality and dependability, your profits won't be drained away by costly service calls. What's more, you'll be backed by advertising and promotion that will bring eager, qualified prospects trooping in.

There are no slack seasons when you sell Chrysler Heating and Air Conditioning. Get the full story from your local Chrysler Distributor . . . today! He's in the Yellow Pages.



CHRYSLER
AIRTEMP

Airtemp Division, Chrysler Corporation, Dept. K-99, Dayton 1, Ohio
Canadian Distributor: Therm-O-Rite Products, Ltd., Toronto, Ontario

1st FOR FASTER FILLING

FASTER: 1/4-turn hook-up.
SAFER: with positive Cam-Lock.
SIMPLER: one nipple for all fills.

Now is the time to reduce delivery costs as much as 20%. We'll prove it to you with *your* equipment at *your* office.

PHILLY RAPID-TITE
Fuel Oil Delivery System

1st WITH THE Adjust-O-Swivel

Here is a Swivel that not only eliminates rotary stress on fueloil hose and nozzles, but gives swiveling action WITHOUT leaking or binding.

An occasional simple adjustment without removal from hose and nozzle keeps it swiveling perfectly for extended service.

When the "O" ring finally wears out, NO NEED TO THROW AWAY. The sealing "O" ring can be replaced for many more months of service.

Model SW-22 designed for 1¼" to 1½" hoses and nozzles.
SK-10 Adjusting Kit: $1.50.

$9.95

Philly RAPID-TITE Division

PLASTIC AND APPLIANCE CO., INC.

5311 Westminster Avenue, Philadelphia 31, Penna.

MAIL TODAY

☐ Have your representative call.

☐ Ship me one Adjust-O-Swivel with Free Adjusting Kit.

Name .....

Company .....

Street .....

City ..... State .....

OHI establishes Committee for Weights and Measures

A COMMITTEE to participate in matters relating to actions of the National Conference on Weights and Measures was voted at a meeting of the executive committee, Distribution Division, Oil-Heat Institute of America.

The committee is to maintain close liaison with the activities of the Conference on all matters pertaining to the delivery of heating oil. Its formation resulted from the recent approval by the Conference of a proposed model state law requiring fueloil distributors to leave a ticket signed by the driver on the premises at the time of each heating oil delivery.

Ray Nathan, president, Oil Heat Institute of Long Island, is chairman of the committee, whose other members are: Joseph Berry, Greensboro, N. C.; Everett Elliott, Danvers, Mass.; T. R. Loizeaux, Sr., Plainfield, N. J.; Al Loucks, Salem, Ore.; Edward Marquard, Cleveland.

Oil Dealers Association of R. I. holds Installation Dinner-Dance

THE ANNUAL INSTALLATION of officers and a dinner-dance was held at the Pawtucket Country Club by the Oil Dealers Association of R. I., Inc., Cranston. Superior Court Justice Joseph R. Weisberger was principal speaker.

Newly-elected officers installed at the affair were: Walter J. Hernandez, president; Salvatore Maisano, 1st vice-president; Joseph Scungio, 2nd vice-president; Frank C. Galego, secretary; John Rotondo, treasurer.

President Hernandez listed as objectives for the coming year increased governmental activity; larger membership among fueloil dealers; advertising, promotion and publicity to acquaint the public with the services and products offered by members of the association.

More of what it takes . . . that's what Mobilheat has! More customer satisfaction built into it! More progressive . . . and aggressive . . . selling power behind it! And for the final proof . . . more *customers!*
If you want to build your business around the fuel oil that leads the field in every way, call your Mobilheat representative . . . and talk business!

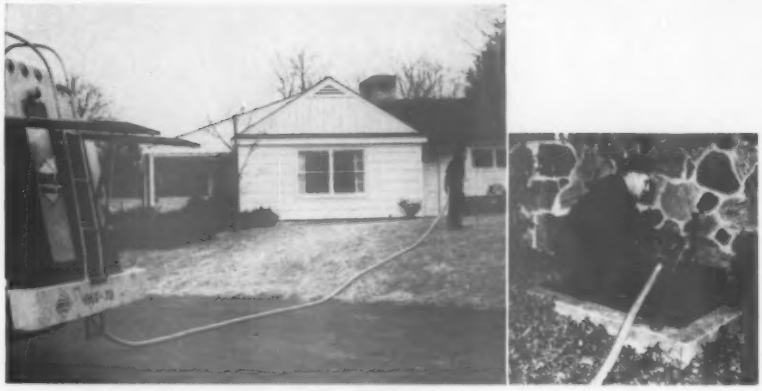
Mobil

Mobilheat... *America's most popular fuel oil brand*

MOBIL OIL COMPANY—A Division of Socony Mobil Oil Company, Inc.
Affiliated Companies: MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

fuel oil & oil heat

Let Goodall "LONG-LIFE" Cut Delivery Costs!



Light Weight Full Flow. . .

"LONG-LIFE"—the Fuel Oil Hose that has *everything* to reduce your delivery costs all-year 'round!

Light in weight—extremely flexible—easier to carry out and re-reel. Result: More stops per truck per day—greater gallonage delivered—less work for the driver.

Goodall Rubber Company Date_____
Whitehead Rd., Trenton 4, N. J.

☐ Send Catalog and Prices of "LONG-LIFE" Fuel Oil Hose.

☐ Have Representative call from nearest Branch.

Company_____

Address_____

City_____ Zone____ State____

"LONG-LIFE" is built to last longer under all conditions of weather and rough handling, and to hold its maximum I.D. to assure full, fast flow. *Complements new tight-fill systems.* Available Sizes: 1", 1¼", 1⅜", 1½".
Contact our nearest branch, or mail coupon, for details and prices.

"If it's GOODALL, it MUST be Good!"

Standard of Quality—Since 1870 HOSE · BELTING · FOOTWEAR · CLOTHING AND OTHER INDUSTRIAL RUBBER PRODUCTS

GOODALL *Rubber Company*

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.
BRANCHES AND DISTRIBUTORS THROUGHOUT THE UNITED STATES.
IN CANADA: GOODALL RUBBER CO. OF CANADA LTD., TORONTO.

Commander Robert Ring new Secretary, OHI of New England

COMMANDER ROBERT C. RING, U.S.N. (Ret.) on July 29 was elected executive secretary, Oil-Heat Institute of New England, succeeding the late Ivan C. Sutherland. He assumed his duties on August 10; Fred Beckwith, who returned from retirement to be acting secretary, returned to Florida on August 14.

The Commander comes to OHI from the position of assistant to the chairman of the board, Curran & Burton, Bay Oil Corp. and Rhode Island Refining Corp. He also has been manager in the preliminary building and organizing of the proposed new $35 million refinery at Tiverton, R. I.

The new Secretary is a graduate of the U. S. Naval Academy, B.S., 1935. His past career included extensive World War II and Korean Destroyer Command, legislative liaison work with Congress on petroleum industry matters; Munition Board mobilization planning of oil industry; Plans Officer Army-Navy Petroleum Board; refinery operation in South America and oil industry staff work with Standard of Ohio and General Petroleum.

He is a member of the Bar of Maine and Virginia, is the author of several published articles on International Law and oil industry operation.

OHI sells 25% of Space for Show in first Week

INITIAL MAILING for space reservations at the 23d National Oil Heat & Air Conditioning Exposition were made on August 14. One week later, Ralph Becker, managing director, Oil-Heat Institute of America, New York, N. Y., sponsor of the Exposition, announced that 25% of the space had been sold.

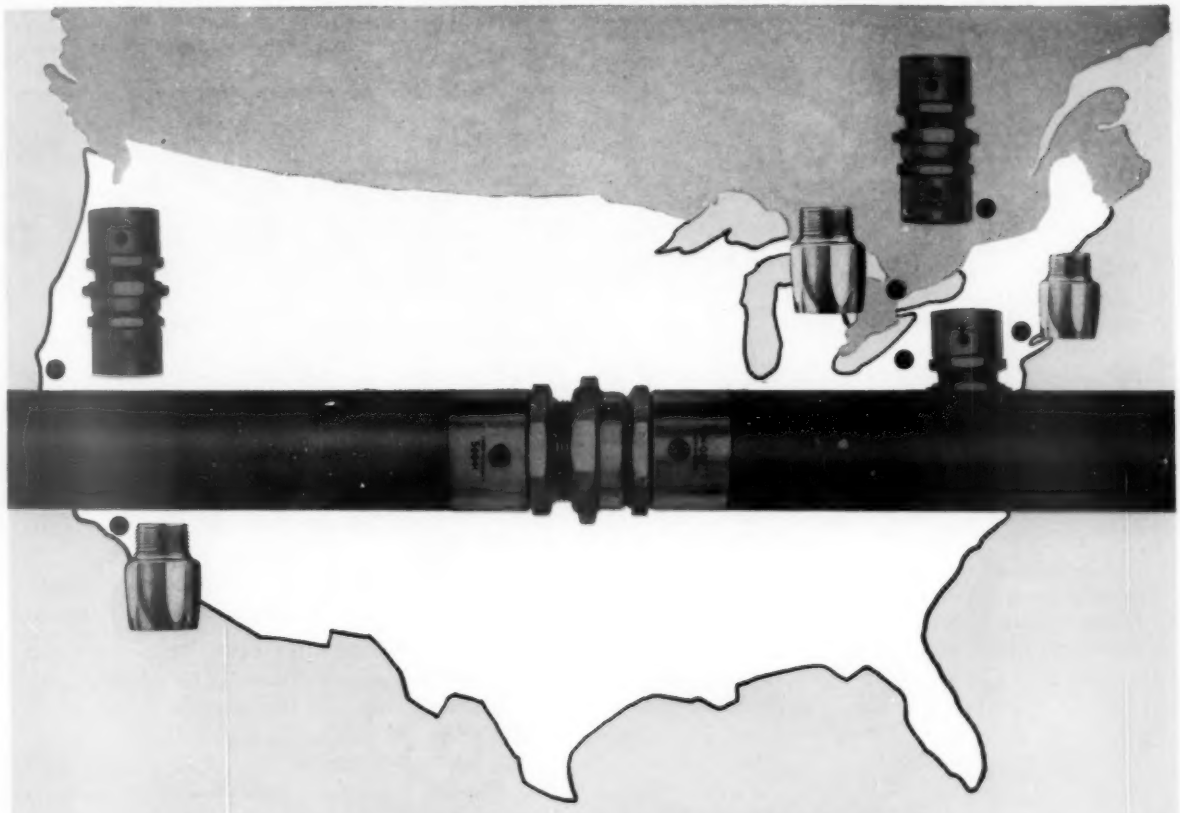
R. S. Doherty, A. W. Cash Valve Mfg. Co., is chairman of the Exposition Committee, which will take place at the Coliseum, New York, April 4 to 7, 1960. Information about available exhibit space can be secured from the Institute at 500—5th Ave., New York 36, N. Y.

IMMEDIATE SERVICE

ANYWHERE in U.S. & Canada. Scovill's nation-wide facilities provide the industry's fastest service on fuel oil and gas pump couplings!

Only Scovill with its country-wide network of sales offices and warehousing facilities is equipped to give you such fast . . . efficient service. All orders for fuel oil and gas pump couplings received by Scovill are shipped *promptly*. And the sizes you want are always *immediately* available. That's because Scovill makes and stocks a complete range —from ¾" to 3" in fuel oil couplings . . . and all standard sizes in gas pump couplings.

The largest—and finest—sales and service force in the industry is ready to consult with you anytime, anywhere when you specify Scovill couplings. And—because you can buy *direct* from Scovill—you save up to ⅓ the former cost of oil and gas pump couplings. Get complete details now. Write: Scovill Manufacturing Company, Hose Coupling Department, Waterbury 20, Connecticut.



Hose couplings by **SCOVILL**

Main office: 99 Mill Street, Waterbury, Connecticut Cleveland: 4635 W. 160th Street Los Angeles: 6464 E. Flotilla Street Houston: 2323 University Blvd. San Francisco: 434 Brannon Street Toronto: 334 King Street, East

TO START INSTALLING SPEED-KLEEN FITTINGS

Your driver now has that extra minute you probably thought he couldn't spare during the peak cold weather. In many instances, all he needs to do is replace an ordinary fill pipe cap with a Speed-Kleen fitting. And thereafter, every delivery will be made easier, cleaner, faster, with delivery costs reduced as much as $5.00 per customer per year.

Deliver more oil with less work —make more profit on every gallon, by using Speed-Kleen nozzle tube and fill pipe fittings.

Don't continue losing profits, write or phone C.G. Eyster at

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.

Officers of Maine Oil and Heating Equipment Dealers' Association, left to right: Donald H. McGovern, executive secretary; Kenneth R. Gifford, J. S. Wadleigh Co., president; Richard A. Morrell, Brunswick Coal & Lumber Co., 2nd vice-president; John P. Cullinan, J. P. Cullinan, Inc., treasurer; Charles L. Hamm, Charles L. Hamm Co., 1st vice-president.

Below: E. P. Hacker, Ballard Oil & Equipment Co., accepts a plaque from President Gifford. Ed Hacker has been president of the association since its founding five years ago and now continues as a member of the advisory council and the board of directors.

OHI of Oregon repeating Oil Heat-O-Rama Contest

FOR A SECOND YEAR the Oil Heat Institute of Oregon is conducting an Oil Heat-O-Rama limerick contest. Contestants will compete for prizes by completing the fifth line of this limerick:

A house-hunting couple named Fleet
Insisted on modern oil heat,
Clean and dependable,
Fuel bills commendable,
. . . . . .

Leonard Gassner, executive secretary of the Institute, explains the contest, which closes September 26, requires the contestant to buy nothing. He does fill out an entry blank, though, which contains questions about his present fuel use, age of the system and whether he is satisfied, etc.

Nearly 2,000 spot television announcements will be used to promote the contest; KPTV, Portland, is carrying from eight to 14 spots daily, seven days a week for 12½ weeks. Nearly as many will be seen and heard over KVAL-TV, Eugene; KBES-TV, Medford; KOTI-TV, Klamath Falls. Some newspaper space also is used.

Thousands of dollars in prizes are offered, all told a total of 154, including 10 weekly awards. A feature of the contest gives an extra $300 to the grand prize winner if his oil heat dealer is a member of the OHI of Oregon.

Pacific National Advertising Agency, Portland, again is handling this year's contest. George P. Griffis is account supervisor; Joseph W. Bennett, account executive and Richard H. Syring handles public relations and publicity.

Maine Association concludes two Weeks of burner Classes

THE THIRD ANNUAL oilburner service school, sponsored by the Maine Oil and Heating Equipment Dealers' Association, consisted of morning and afternoon classes during the weeks of August 10 and 17. The training course was held at Maine Vocational Technical Institute, South Portland, Me.

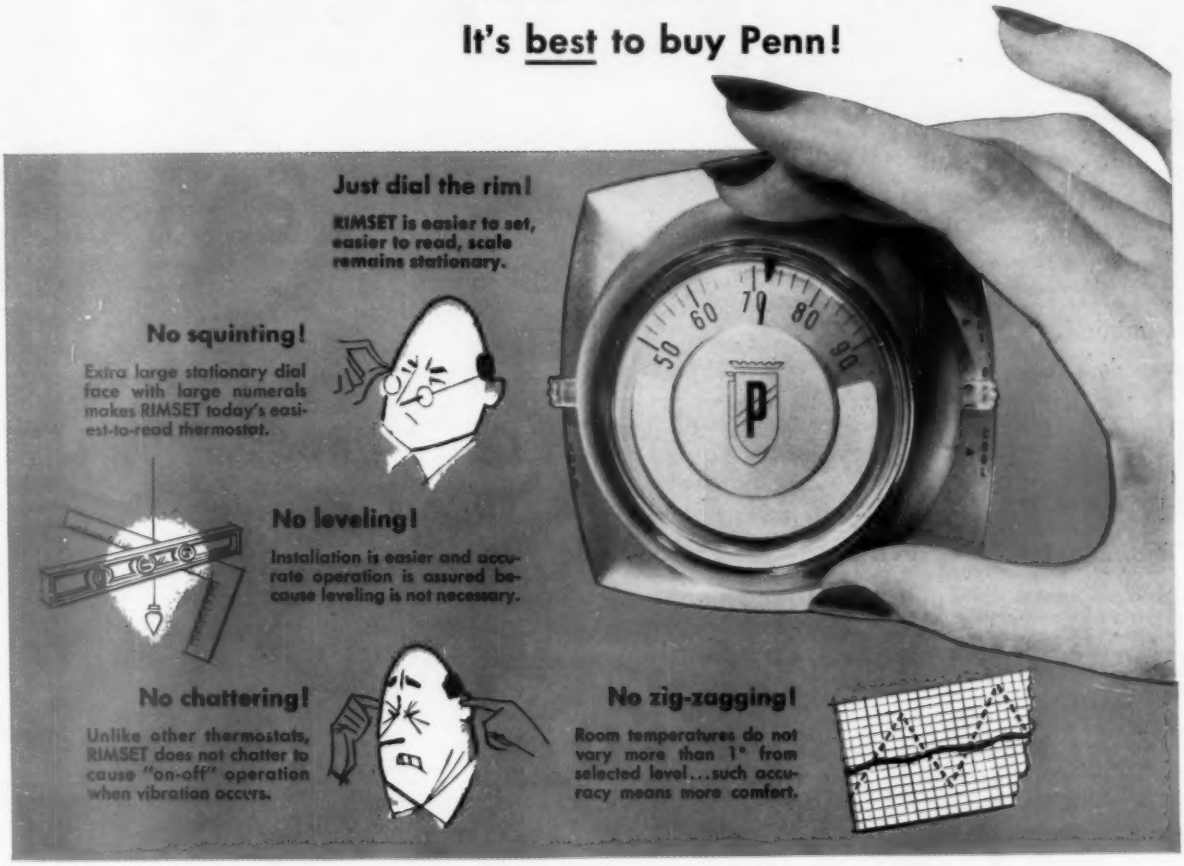
Men could enroll for either or both weeks, since the course was designed to be helpful to new men as well as those with more experience.

COMPARE

...only PENN'S RIMSET has all these thermostat features

Take a few minutes to compare room thermostats... you'll discover *only* the Penn RIMSET brings you *all* the selling advantages shown below. In addition, it has beautiful, distinctive styling that's at home in any home. And, RIMSET is so versatile! Various subbases are available for 12 different heating and cooling applications. Thus, if cooling is added later, simply change the subbase and use the *same* thermostat. So... take a few minutes to compare and you, too, will discover...

It's best to buy Penn!


Just dial the rim!
RIMSET is easier to set, easier to read, scale remains stationary.
No squinting!
Extra large stationary dial face with large numerals makes RIMSET today's easiest-to-read thermostat.
No leveling!
Installation is easier and accurate operation is assured because leveling is not necessary.
No chattering!
Unlike other thermostats, RIMSET does not chatter to cause "on-off" operation when vibration occurs.
No zig-zagging!
Room temperatures do not vary more than 1° from selected level...such accuracy means more comfort.
50
60
70
80
90
P

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

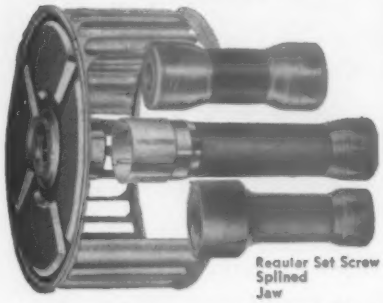
AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

fuel oil & oil heat

QUALITY is our business .. without *any* compromise

***AND ONLY Guardian* GIVES YOU ALL THREE —**

1. FLEXIBLE COUPLINGS



Regular Set Screw Splined Jaw

Only Guardian gives you these features—

- ROLL SPINNING—Exclusive process joins all three components at one time—while in final operating alignment.
- BRAIDED RUBBER—Ground to absolute true concentricity. Furnished in BUNA-N TUBE and NEOPRENE COVER. Lateral and angular alignment requirements fully met.
- ONE-PIECE DESIGN—Minimizes assembly and handling costs. Made to exact lengths required.

Over 5,000,000 Guardian couplings are on original equipment. This is your assurance of highest quality and universal acceptance in the field.

2. OIL TANK VALVES

No. 1910 B

Check These Superior Guardian Features—

- Metal-to-metal seating.
- Highest quality machined bar stock.
- Greater wall and body strength.
- Fusible linkage available in all designs.
- Valve designs for every type of installation.

3. QUIK JOINT

Steel compression fittings for connecting steel pipe.

Patent No. 2,685,460

- Eliminates threading of pipe.
- Decreases cathodic corrosion and electrolysis.
- Guaranteed for pressure up to 2000 P.S.I.
- Allows 7° angular deflection.
- U.L. approved for oil and gas.

Write for free descriptive literature.

Guardian PRODUCTS CORP.
COUPLING DIVISION

Dept. F-99 1215 East Second Street
MICHIGAN CITY, INDIANA

Establish C-I Associates Unit in OHI's Comm.-Ind. Section

ESTABLISHMENT of a Commercial-Industrial Associates Unit, as part of the Manufacturers' Division, Commercial-Industrial Section, Oil-Heat Institute of America, Inc., has been announced.

The new Unit, of which Milton T. Way, Ray Burner Sales, Inc., Long Island City, N. Y., has been designated chairman, "provides a duly authorized industry trade association for all franchised enterprises dealing in services and installation of commercial and industrial fuel burners and accessories."

Membership dues are $50 annually, open to any franchised distributor or representative of commercial-industrial fuel burning equipment and accessories, provided he is sponsored by an OHI member manufacturer.

A brochure and membership application form mailed to some 200 representatives whose names were furnished by OHI manufacturers lists a total of 16 projects which the Commercial-Industrial Section already is undertaking, which will benefit all segments of the industry.

National Petroleum Convention to explore Ways to up Demand

A SPECIAL FEATURE of the 57th annual meeting of the National Petroleum Association, Washington, D. C., taking place September 16 to 18 at the Hotel Traymore, Atlantic City, N. J., will be a panel discussion on ways of increasing the demand for petroleum products.

B. L. Ray, vice-president, Esso Standard Oil Co., and chairman of the Convention Program Committee, announces that three well-known marketers will participate in the discussion. Dr. William J. Sweeney, vice-president, Esso Research and Engineering Co., and chairman of the New Petroleum Uses for the Jersey company, will cover the subject as it applies to the middle distillates. Harry L. Moir, vice-president Pure Oil Co., will cover gasoline and Howard P. Ferguson, manager of wholesale and subsidiary sales, Standard Oil Co. (Ohio), will consider lubricating oil.

Thomas Ryan named Secretary for Mechanical Contractors

THOMAS J. RYAN has been named executive secretary, Mechanical Contractors Association of America, Inc., New York 20, N. Y.

He formerly served as special assistant to the general counsel, National Labor Relations Board, having transferred to the general counsel's staff early in 1956. After a 1949 graduation from Columbia University Law school, Ryan engaged in private civil practice before entering government.

Boston area credit Group names Officers, Directors

LEON FRANK, Central Fuel Co., Boston, was named chairman, Area Fuel Exchange Group (Boston), National Association of Credit Executives, Inc. Others elected were: John Annino, General Heat & Appliance Co., Boston, vice-chairman; Robert Bowman, Gibbs Oil Co., Saugus, secretary.

The board of directors consists of: Thomas McIntosh, Buckley & Scott Co., Watertown, Peter MacFarlane, Peter MacFarlane Oil Co., Roslindale; Melvin Fisher, Marvel Heat Corp., Dorchester; William Ryan, Metropolitan Coal Co., Boston; Albert Winsloe, A. C. Winsloe Co., Brighton; John Simione, Simione Oil Co., E. Boston.

Treasury of Advertising Piece aimed at Home heated with Gas

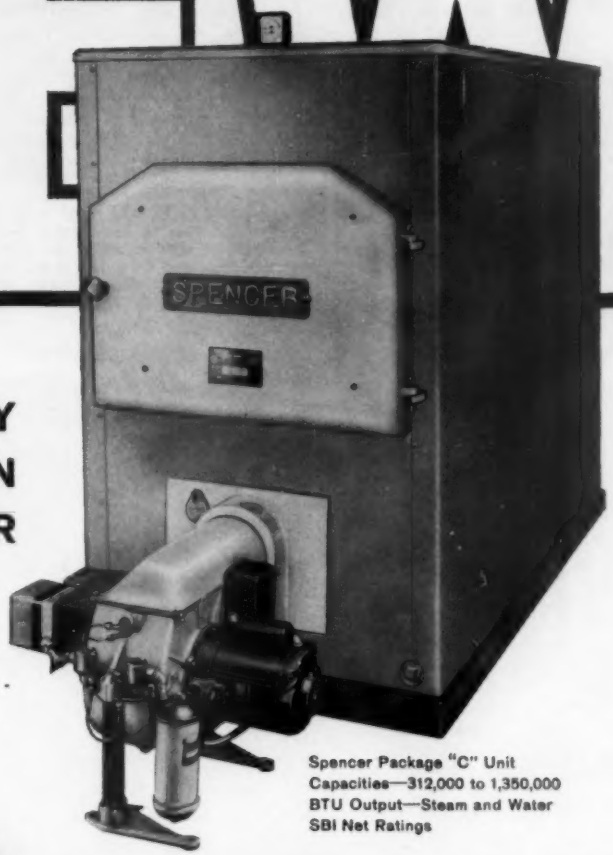
"BURDENED WITH THE high-priced Heat?", a pamphlet prepared for Oil-Heat Institute of America's Treasury of Advertising, is the first advertising piece in the series aimed specifically at the homeowner with gas heat. The booklet is designated OHI 7065.

Done in cartoon style, the pamphlet urges the homeowner to stop paying high heating bills and to change to oil for better heat at lower cost.

Inquiries for this and other Treasury of Advertising pieces should be sent to OHI, 500—5th Ave., New York 36, N. Y.

NEW

NO REFRACTORY COMBUSTION CHAMBER



Spencer Package "C" Unit
Capacities—312,000 to 1,350,000
BTU Output—Steam and Water
SBI Net Ratings

SPENCER OIL-FIRED PACKAGE "C" UNIT

featuring . . . **NO REFRACTORY COMBUSTION CHAMBER!** None to buy, none to build . . . merely locate precast refractory base, slide boiler shell into place, assemble jacket, and position burner unit . . . turn it on, and that's it!

LOWER COSTS! New Spencer Package "C" Unit is quickly and easily installed . . . no high installation charges. And the elimination of a refractory chamber means lower operating costs . . . *lower maintenance costs!*

LOWER WATERLINE! A full 20% reduction in waterline height. Spencer's Unit is a real space-saver . . . and simple to clean, too! Boiler fire tubes are easily reached through the front flue door.

NEW, PROVEN METHOD! Spencer's revolutionary firing method has been rigorously tested, in accordance with SBI Table 2 Code . . . tested and FULLY APPROVED! Build up your boiler business . . . with the sensational new Spencer Package "C" Unit!

SPENCER HEATER
LYCOMING DIVISION
WILLIAMSPORT Avco PENNSYLVANIA

For complete details on any of Spencer's complete line of boilers, write to: Spencer Sales, Avco Corporation, Williamsport, Pa.

fuel oil & oil heat

SCULLY
UNIFIL®
SYSTEM
PAYS FOR
ITSELF
WITHIN
A YEAR!

★ UNIFIL System is the culmination of twenty years' experience in designing and producing tight connections.
★ Faster hook up and break away.
★ Design insures mating surfaces against damage.
★ Nozzle itself loosens and tightens cap.
★ Allows increased delivery speeds.
★ UNIFIL System makes every fill pipe you serve the same size!

Bulletin RA-100 contains the facts. Ask for your copy.

OHI

SCULLY SIGNAL COMPANY

176 GREEN STREET, MELROSE 76, MASS.

IN CANADA: E. S. Gallagher Sales, Ltd., 10 Hafis Road, Toronto, Ontario

Top officials of the Oil Heat Institute of Oregon elected at the annual meeting in Salem, left to right: Joseph B. Young, Filtered Heating Oils, Hood River, secretary; James C. Coon, Diamond Fuel Co., Portland, re-elected treasurer; Robert Inman, Inman Bros., Vancouver, Wash., re-elected vice-president; Alfred W. Loucks, Home Fuel Oil Co., Salem, named as president of the group.

Schedule of Meetings set for Warm Air Convention

COMMITTEE MEETING schedules have been set for the 46th annual convention, National Warm Air Heating and Air Conditioning Association, Cleveland, to take place at the Chase-Park Plaza Hotels, St. Louis, Mo. Committee meetings will be held on November 30, December 1 and 2. The convention meets for the first time during the afternoon of December 2, and continues with all-day sessions on December 3 and 4.

The December 3 morning session will be a general meeting with a program to include coverage of the Silver Shield program and other pertinent matters. During the afternoon that day two sessions will be held simultaneously—one will consider subjects of interest to manufacturers, the other will be aimed at dealers.

Both morning and afternoon sessions on December 4 are designed for dealers and will continue the discussion of business management subjects begun the day before.

South Carolina Meeting considers oil heat Promotion

A FUELOIL SESSION featured the program of the 16th annual Summer meeting of the South Carolina Oil Jobbers Association, which took place at the Hotel Fort Sumter, Charleston, S. C., August 9-11.

The session, sponsored by the group's OHI Chapter opened with an address by Van Noy Thornhill, Charleston Oil Co., recounting his experience in competing with low-priced natural gas. Then a panel discussion, moderated by Don H. Ward, executive secretary, North Carolina Oil Jobbers Association, explored how to secure and expend funds for oil heat promotion. Panel members were: Stewart Kennedy, president, North Carolina Oil Heat Council; Reggie Moffatt, president, Florida Better Home Heat Council; Henry T. Finch, Columbia (S. C.) Fueloil Dealers Association.

Central Supply Association planning for Fall Meeting

THE FALL MEETING of Central Supply Association will take place at Chicago's Palmer House, September 30, October 1 and 2.

Dr. George Cline Smith, vice-president, F. W. Dodge Corp., will discuss the outlook for "The soaring 60's," as one of the principal speakers. Others will include Lawrence E. Spivak of "Meet the Press" and Arthur H. "Red" Motley of *Parade* magazine.

During the meeting J. Porter Henry, sales training specialist, will conduct a Manufacturers Sales Seminar, covering the subject of how manufacturers can help their wholesalers by offering more effective sales training.

The seminar is the third in a series of workshops for manufacturer guests at the convention.

Ingersoll

Makes the Stainless Steel*

that Makes Combustion Chambers Better

Heat Resisting • Sheared to Size

We custom shear this special steel to your blank sizes or multiples—to reduce scrap, to save you time, and to cut your costs.

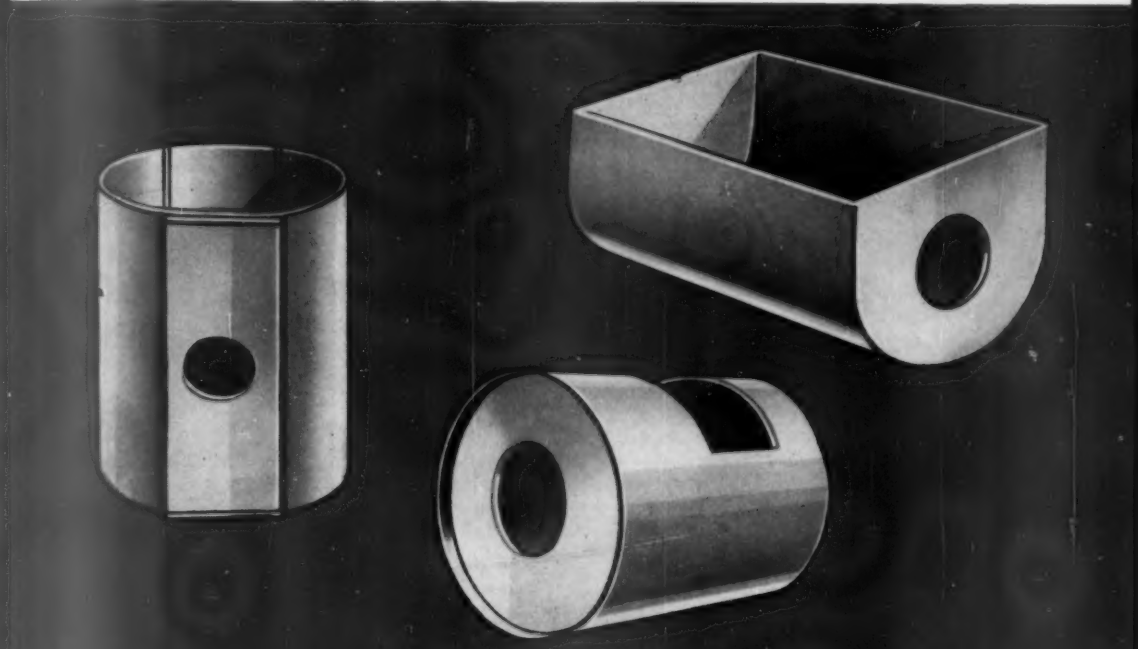
The better the steel, the better the combustion chamber for oil fired furnaces. For this purpose, *nothing beats Ingersoll heat-resisting stainless.*

This special analysis steel is scientifically formulated to withstand high temperatures, and constant expansion and contraction under heating and cooling.

With exceptional forming characteristics, Ingersoll heat resisting stainless steel fabricates easily to permit freedom of design and production techniques.

So—it *pays* to specify Ingersoll heat resisting stainless steel for *your* combustion chambers. Try it, and see.

*Ingersoll makes the steel—not the combustion chambers



ADVANTAGES OF STAINLESS STEEL COMBUSTION CHAMBERS

- No breakage in shipment or handling
- Lighter weight lowers freight costs
- Quicker heating—for greater efficiency
- Cleaner heat—better temperature control

1884 75 YEARS 1959

Ingersoll STEEL DIVISION

Borg-Warner Corporation

NEW CASTLE, INDIANA

CHOOSE FROM GENERAL ELECTRIC'S LINE

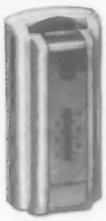
THERMOSTATS

. . . your choice of three distinctive, smartly styled new *Straight-Line* thermostats or the familiar "K" thermostat, all designed around G.E.'s proved, dependable mechanism.

3AHT20 Low voltage (24 volt) 2 wire heating service, 55 to 85 F. Variable heat anticipator 0.2 through 0.8 amps. SPST. Snap action mechanism. Adjustable temperature differential. Large, easy-to-read thermometer dial.

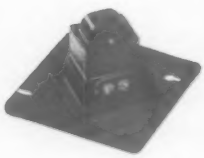
3ACT20 Low voltage (24 volt 2 amp max) cooling service, 55 to 85 F. Same smart design as heating model. Fixed cooling anticipation. SPST. Makes contact on temperature rise.

3AAT30 Low voltage (24 volt—2 amp max) heating-cooling thermostat with sub base. Manual or automatic control of fan. Standard SPDT contacts. Variable heat anticipator. 0.2 through 0.8 amps. HEAT-OFF-COOL selector switch. Fixed cooling anticipation.



K1AN200 Low voltage (24 volt) heating service, 55 to 85 F. Variable heat anticipator 0.2 through 0.8 amps. Adjustable temperature differential. Standard neutral grey cover, aluminum strap with liquid thermometer.

OUTDOOR CONTROL SYSTEM



Designed to work with either the new straight-line or the K thermostat, this G-E outdoor-indoor control system provides an economical means of compensating for loss of heat through outside walls during cold winter weather.

Outdoor thermostat Low voltage (24 volt) reacts to outdoor temperature before winter cold penetrates walls to cause discomfort.

24-volt transformer Provides current for system economically, safely. Installs handily on any standard conduit box.

MASTER CONTROLS

These General Electric master controls are safety controls, designed to operate the oil burner and help protect the system. Like all G.E. controls, they're easy to service and install. Features: constant or intermittent ignition. Locks out on ignition failure. Recycles on flame failure during normal heat run. Positive safety timing.

Stack-mounting, 90 second lock out	
curved flange, welded helix, 115 v, intermittent ignition	CR7865A101A2
curved flange, welded helix, 115 v, continuous ignition	A101B2
curved flange, welded helix, 115 v, continuous ignition, line voltage	A101L2
curved flange, welded helix, 230 v, intermittent ignition	A101A3
curved flange, welded helix, 230 v, continuous ignition	A101B3
curved flange, bolted helix, 115 v, intermittent ignition, high temp. bimetal	A101C2
curved flange, bolted helix, 115 v, continuous ignition, high temp. bimetal	A101D2
curved flange, bolted helix, 230 v, intermittent ignition, high temp. bimetal	A101C3
curved flange, bolted helix, 230 v, continuous ignition, high temp. bimetal	A101D3
flat flange, welded helix, 115 v, intermittent ignition	A101H2
flat flange, welded helix, 115 v, continuous ignition	A101J2
flat flange, welded helix, 230 v, intermittent ignition	A101H3
flat flange, welded helix, 230 v, continuous ignition	A101J3
Remote-mounting, 25 second lock out (for use with 3AHD2 Flame Detector)	
intermittent ignition, 115 v	A105A2
intermittent ignition, 230 v	A105A3
continuous ignition, 115 v	A105B2
continuous ignition, 230 v	A105B3
Remote-mounting, 45 second lock out (for use with 3AHD2 or D4 Flame Detector)	
intermittent ignition, 115 v	A105E2
intermittent ignition, 230 v	A105F3
continuous ignition, 115 v	A105F2
continuous ignition, 230 v	A105F3

FOR MORE INFORMATION, CALL YOUR G-E HEATING CONTROLS DISTRIBUTOR

Section 740-135, General Electric Company, Schenectady 5, New York

OF SIMPLE, EASY TO INSTALL CONTROLS

FLAME DETECTORS

Highly sensitive, accurate detector units designed to give dependable operation and protection with General Electric remote mounted master controls. Features: stack or combustion chamber mounting flexibility. Fast acting quartz rod element. Clutch action provides immediate reaction to temperature change.

Nomenclature	
3AHD2A2	Without shield, length 7 15/32 inches
3AHD2B2	Without shield, length 11 15/32 inches
3AHD2C2	Without shield, length 19 15/32 inches
3AHD2D2	With shield, length 7 15/32 inches
3AHD4	With bimetal actuated flame detector for stack mounting, 6 1/2" insertion

WARM AIR LIMIT CONTROLS

Available in limit only or fan and limit models. These sturdy controls regulate forced-circulation warm air systems, and protect the furnace from overheating.

Nomenclature	
CR2992-B111A2	Opens on temperature rise (150 F to 350 F) adjustable limit
B111A3	Opens on temperature rise (300 F to 700 F) adjustable limit
B110A2	Fan and limit with summer switch. Adjustable fan, adjustable limit, and adjustable fan differential.

STEAM PRESSURE CONTROLS

Dependable "direct-acting" limit control that prevents pressure from going too high in a domestic steam system, and maintains a certain pressure in the boiler until the thermostat is "satisfied".

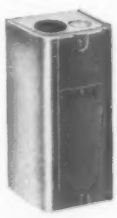
Nomenclature	
CR2927-E108A2	Non-adjustable, normally closed, male fitting
E108A3	Non-adjustable, normally closed, female fitting
E108A4	Non-adjustable, normally closed, compression fitting
E108B2	Adjustable, normally open, male fitting
E108B3	Adjustable, normally open, female fitting
E108B4	Adjustable, normally open, compression fitting
E108D2	Adjustable, normally closed, male fitting
E108D3	Adjustable, normally closed, female fitting
E108D4	Adjustable, normally closed, compression fitting

HOT WATER LIMIT CONTROLS

These controls are sensitive to changes in water temperature, and are generally installed directly into the boiler to provide dependable temperature control and system protection. Adjustable 70 through 250 F.

Nomenclature	
CR2992-B109A2	SPST—normal acting open on temperature rise
B109F2	SPST—fast acting open on temperature rise
B109E2	SPDT—normal acting open on temperature rise or closes on temperature rise
B109J2	SPDT—fast acting open on temperature rise or closes on temperature rise
B109D2	SPST—normal acting closes on temperature rise
B109H2	SPST—fast acting closes on temperature rise

TRANSFORMER RELAYS



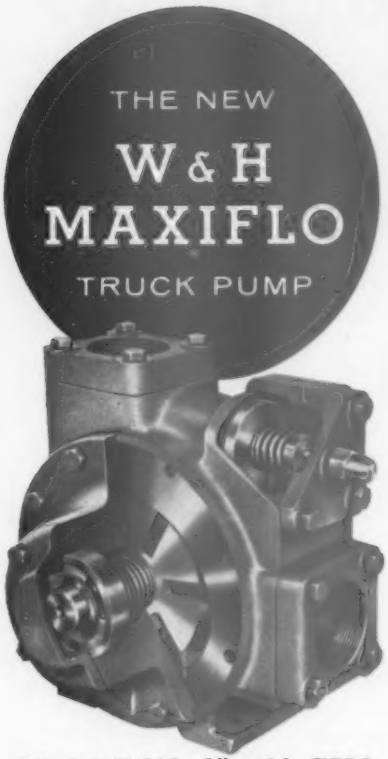
Here's a combination transformer and relay that operates circulator, blower or fan motors, and burner motors. In addition they can be wired to control a low voltage circuit.

Nomenclature	
CR7865-C100B2	With enclosure, primary 115 volt, 50/60 cycle
C100B3	With enclosure, primary 230 volt, 50/60 cycle
C100B4	With enclosure, primary 115 volt, 25 cycle
C100B5	With enclosure, primary 230 volt, 25 cycle

FAN AND LIMIT SWITCHES

This new G-E control is now being incorporated in the system of many furnace manufacturers. Be sure you replace the AHL5 in any system you service with the exact same model. There's a complete selection of models available to fit any domestic oil or gas furnace, any 24 volt control circuit.

GENERAL ELECTRIC



Model T-882, 2"—80 GPM
Model T-9125,
2½"—125 GPM

- **ROTARY**
- **SLIDING VANES**
- **POSITIVE DISPLACEMENT**
- **PERMANENTLY LUBRICATED ANTI-FRICTION BEARINGS**

SPECIAL FEATURES:

Free porting for unobstructed flow
Permanently sealed anti-friction bearings — no lubrication necessary — ever.
Flanged connections
Long life trouble-free mechanical seals
Pipe plugs for vacuum and pressure gages
Thrust collars to minimize wear due to end thrust

ADVANTAGES TO THE USER:

Easy installation due to flanged connections
Low maintenance results from permanently lubricated sealed bearings, self adjusting vanes.
Quiet operation from close tolerance machining, quiet vanes, anti-friction bearings
Low initial cost
Optional rotation — easily reversible

Write wire or call for full details

WILLIAMS & HUSSEY MACHINE CORP.

MILFORD, NEW HAMPSHIRE
TEL: MILFORD, N. H. 761

ESPA Meeting to highlight efficient fueloil Operation

THE FALL MEETING of the Empire State Petroleum Association, September 13 to 15 at Saranac Inn, N. Y., will feature on the 14th a panel discussion, "More Profit through efficient fueloil Operation."

Moderator will be L. S. Marshman, manager, Wholesale Planning Dept., Mobil Oil Co. Speakers and their topics are:

William G. Kane, Lewis Associates, Port Washington, N. Y., "Burner Service";

Leonard Braun, Piping Rock Fuel Corp., Halesite, N. Y., "Selling oil Heat to Builders";

William H. Henwood, Meenan Oil Co., Levittown, Pa., "Modern accounting Methods";

William F. Briggs, Valley Oil Co., Inc., Middletown, Conn., "Increasing fueloil Sales";

Herbert M. Spade, E. Robison, Inc., Hartsdale, N. Y., "Developments in delivery Procedure and truck operation."

Also scheduled for discussion during the meeting are recent developments in ESPA's proposed comprehensive business insurance program and regulations on state and federal wage and hour laws.

Silver Shield training Programs inaugurated in two more Cities

TWO MORE LOCAL Silver Shield Training Programs have been inaugurated as organization action to implement a Silver Shield program for warm air heating installations. The National Warm Air Heating and Air Conditioning Association, Cleveland, reveals that a program started in Sharon, Pa. on July 30 and that one is expected to get under way in Grand Rapids, Mich. in mid-September.

The Sharon training program is a preparatory step to launching a full-fledged certified warm air installation program in Mercer County, Pa.

The Grand Rapids training effort probably will require two sessions per week to accommodate the large enrollment.

Training programs have been completed in Kalamazoo and Lansing, Mich., where 56 students were graduated. Programs are being conducted in Rochester, N. Y., 45 students; Nashville, Tenn., 30 students; Niagara Falls, N. Y., 35 students.

The course of instruction has been revised so that it now consists of 12, two-and-a-half hour sessions on a one-session-per-week basis. It covers the design, installation, adjustment and balancing of Silver Shield winter air-conditioning and summer air-conditioning systems in all types of residences. The training is a required activity in the establishment of a Silver Shield program.

Ashtabula, Ohio, Council has Election of Officers

MARTIN CREEDON, Lake County Oil Co., was elected president at the annual meeting of the Better Heating Council, Inc., Ashtabula, Ohio. Wilbur Blackburn, Sinclair Oil Co., was named vice-president; William Daniels, Daniels Oil Co., secretary; Art Picard, Picard Oil Co., treasurer.

F. L. Allemeir, Ashtabula County Farm Bureau and Robert Dunham, Robert Dunham & Co., were elected Trustees.

Committee chairmen were appointed, as follows: By-Laws and Finance, N. R. Steenstra, Standard Oil Co.; Membership, Frank Daniels; Advertising, Robert Cochran, Socony Mobil.

Heaney named Chairman of OHI Insurance Trust

THE BOARD OF TRUSTEES of the Oil-Heat Institute of America Distribution Division Insurance Trust elected Fred Heaney, president, OHI of America, as chairman. He succeeds George Wolf, Jr., York, Pa., who has served as a trustee for the past seven years and as chairman for the past two years.

The Board of Trustees now consists of Heaney, Wolf and T. R. Loizeaux, Sr., Plainfield, N. J.

The same three will serve also as trustees for the OHI of America Distribution Division pension plan trust, with Heaney as chairman. The pension plan is set up completely separate from the insurance trust.

It's easy to convert manual coin valves to automatic venting...

with No. 55 KEENEY

DUOVENT

AUTOMATIC CARTRIDGES

1. **REMOVE** coin valve screw.
2. **LEAVE** old coin valve body in place.
3. **INSERT** No. 55 Keeney DUOVENT Automatic Cartridge.

That's all there is to it! The easy, low-cost way to convert manual coin valves to automatic venting. No tools needed! The perfect answer to modernization of existing hot water heating systems.

THE KEENEY MANUFACTURING CO.

NEWINGTON, CONNECTICUT

Follow the leader — KEENEY

NOW!
QUIET AUTOMATIC
HI-RECOVERY
OIL-FIRED HOT WATER HEATERS
COPPER LINED Heaters Guaranteed
15 YEARS
GLASS LINED Heaters Guaranteed
10 YEARS

THREE SIZES
30
50
70
Gallons Storage
All with Hi-Recovery features. Other sizes up to 270 Gals. per hr. recovery.
HI-TEST
GALVANIZED
(A.S.M.E. Labeled)
Hi-Test — Glass Lined
125 gals. to 650 gals. per hour recovery
Same Day Shipments
From Warehouse Stocks
A PRODUCT OF
QUIET AUTOMATIC BURNER CORP.
33-35 Bloomfield Avenue
Newark 4, N. J.
CHICAGO — BALTIMORE
BOSTON — CHARLOTTE, N. C.
JACKSONVILLE & MIAMI, FLA.

Heating-Cooling Council sets up speakers' Bureau

ESTABLISHMENT of a speakers' bureau by Better Heating-Cooling Council, New York 17, N. Y., has been announced. It's part of the Council's home builder program and is designed to inform the builders about the advances and benefits of modern hot water heating systems.

Bureau members are available on a no-charge basis for scheduled talks before local builder groups throughout the country. Discussed in the talks are zoning, cooling the hydronically-heated house, problems in hard-to-heat houses.

Other activities in the program include publicity for builder publications, builder sales kit, hydronics display in the National Housing Center and participation in the Women's Conference on Housing.

This year — September 15-17 in Washington, D. C.—the conference will be called the Family Conference on Housing and will feature housewife delegates, as it has for the past three years, plus the husbands and teenagers.

Northwest Petroleum sponsors 3-day oilburner service School

IN COOPERATION with Dunwoody Institute, the Northwest Petroleum Association, Minneapolis, Minn., began on August 10 a series of four three-day oilburner service schools for heating oil jobbers and their employees The course also was conducted in three-day programs starting August 12, 17 and 19.

Designed to teach the fundamentals of servicing vaporizing and gun-type oilburners, the course covered the principles of burning oil, the mechanics of the burner, the controls and the importance of customer relations.

❖

Abraham Zeidner now is a member of the field sales staff, Ralph N. Brodie Co., San Leandro, Calif., serving Westchester, Dutchess and Putnam Counties, New York. During some 14 years with the firm, Zeidner was service manager of the Brodie facility in Mt. Vernon, N. Y.

Prevent costly vapor loss with
OPW
TANK VENTS

No. 209 10"

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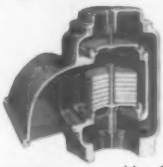
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• ABOVE GROUND STORAGE TANKS
• UNDERGROUND STORAGE TANKS
• SMALL HOME STORAGE TANKS
• FARM SKID TANKS

No. 95
There's a vapor saving OPW Tank Vent for every purpose. Precision machined, product engineered for lifetime use, they are your INVESTMENT against vapor loss due to product expansion and temperature variation. Weighted to specifications, OPW Tank Vents trap and hold vapors and release only at set pressures, insuring maximum protection and dollar dividends. Double mesh screen readily accessible for inspection maintains bulk storage safety.
Send for OPW Tank Venting and Emergency Relief Recommendation Chart!
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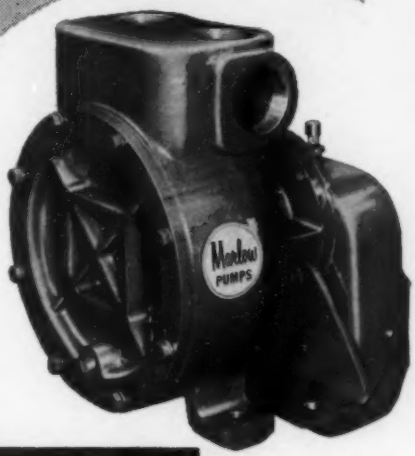
FOR BEST TRUCK PUMP PERFORMANCE!



MARLOW®
MODEL 2MIG

self-priming centrifugal truck pump operates at a capacity range from 30 to 70 G.P.M. Input speed is 400 to 700 R.P.M.

MARLOW®
MODEL 2C2G

self-priming centrifugal truck pump operates at a capacity range from 50 to 100 G.P.M. Input speed is 530 to 900 R.P.M.

Before selecting the right pump for your home delivery tank truck, first check these exclusive Marlow features:—

- ...*No metal-to-metal contact* of internal pump parts *eliminates wear* and greatly increases pump life.
- ...*Mechanical shaft seal* is self-lubricating and self-adjusting. Proved in thousands of petroleum pumping applications, it eliminates leaks and dripping.
- ...*efficient operation* throughout entire performance range.
- ...*Patented diffuser self-priming system* permits the pump to reprime itself automatically. Welding shot will not cause damage to pump parts.
- ...*Greater capacities* at low cost, weight and size than obtained with other types of pumps.

Marlow has a complete range of self-priming pumps for handling petroleum products in bulk plants, retail delivery trucks and transports. Write *today* for complete information and the name of your nearest Marlow dealer.

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Marlow PUMPS®

MARLOW PUMPS®

DIVISION OF BELL & GOSSETT CO.

Morton Grove, Illinois • Midland Park, New Jersey • Longview, Texas

Sell Draft King Chimney Caps

You make money . . . Customers save money!

The Perfect Cap for all Chimneys, Flues and Ventilators.

You'll do a volume business with Draft King when customers learn of its money-saving benefits.

Draft King turns flue gases into perfect heating combustion—eliminates chimney clogging soot and costly fuel waste. No moving parts—nothing to wear out. Made of either all-weather galvanized steel or aluminum.

Other DRAFT KING Customer Benefits:

- Wind, rain, snow and ice proof
- Eliminates damaging chimney fires
- Acts as a spark arrester
- Prevents pilot blowouts
- Easy to install
- Improves appearance of chimney
- Priced under competitive makes

Stops ALL draft troubles!

SIDE DRAFTS

UP DRAFTS

DOWN DRAFTS

Manufactured by
A. R. WOOD MFG. CO.
Luverne, Minnesota

Calendar of Coming Events

SEPTEMBER

10—Westchester OHI, Westchester Country Club, Rye, N. Y.

13–15—Empire State Petroleum Association, fall meeting, Saranac Inn, N. Y.

16–17—Ohio Petroleum Marketers Association, fall conference, Sheraton-Cleveland Hotel, Cleveland.

16–18—National Petroleum Association, annual meeting, Traymore Hotel, Atlantic City, N. J.

17—Long Island Petroleum Credit Manager's Association, credit conference, Garden City Hotel, Garden City, N. Y.

19–27—Eastern States Exposition, Springfield, Mass., with Oil Centennial Theme.

20–22—Oil-Heat Institute of America, Board of Directors meetings, Seaview Country Club, Absecon, N. J.

20–22—Pennsylvania Petroleum Association, fall convention and annual meeting, Pocono Manor, Pa.

20–23—North Carolina Oil Jobbers Association, annual meeting, Grove Park Inn, Asheville, N. C.

27–29—National Association of Oil Equipment Jobbers, annual convention and trade show, Leamington Hotel, Minneapolis, Minn.

30–Oct. 2—Central Supply Association annual convention, Palmer House, Chicago.

OCTOBER

11–13—Tennessee Oil Men's Association, Annual fall convention, Andrew Jackson Hotel, Nashville, Tenn.

13–16—Fuel Merchants Association of New Jersey, Exhibit and convention, Haddon Hall, Atlantic City.

18–21—Pennsylvania Petroleum Association, management institute, Nittany Lion Inn, State College, Pa.

21—Westchester OHI meeting, Waldorf-Astoria Hotel, New York City.

NOVEMBER

2– 5—Air-Conditioningg and Refrigeration Industry, 11th Exposition, Atlantic City, N. J.

9–11—American Petroleum Institute, annual meeting, Conrad Hilton, Palmer House and Congress Hotels, Chicago.

11–13—National Fire Protection Association, fall conference, Hotel Fort Des Moines, Des Moines, Ia.

30–Dec. 2—North American Heating & Airconditioning Wholesalers, Inc., convention, St. Louis.

DECEMBER

3–4—National Warm Air Heating and Air conditioning Association, Chase Park-Plaza Hotel, St. Louis, Mo.

20—Westchester OHI meeting, Waldorf-Astoria Hotel, New York City.

Mobil's domestic Activities to operate as a single Unit

OPERATIONS of the principal wholly-owned affiliates of Socony Mobil Oil Co., Inc., New York 17, N. Y., in the United States are being combined with the parent company's domestic operations into a single coast-to-coast operating unit, Mobil Oil Co. Albert L. Nicherson, president of Socony Mobil, and Herbert Willetts, president of Mobil Oil, made the announcement.

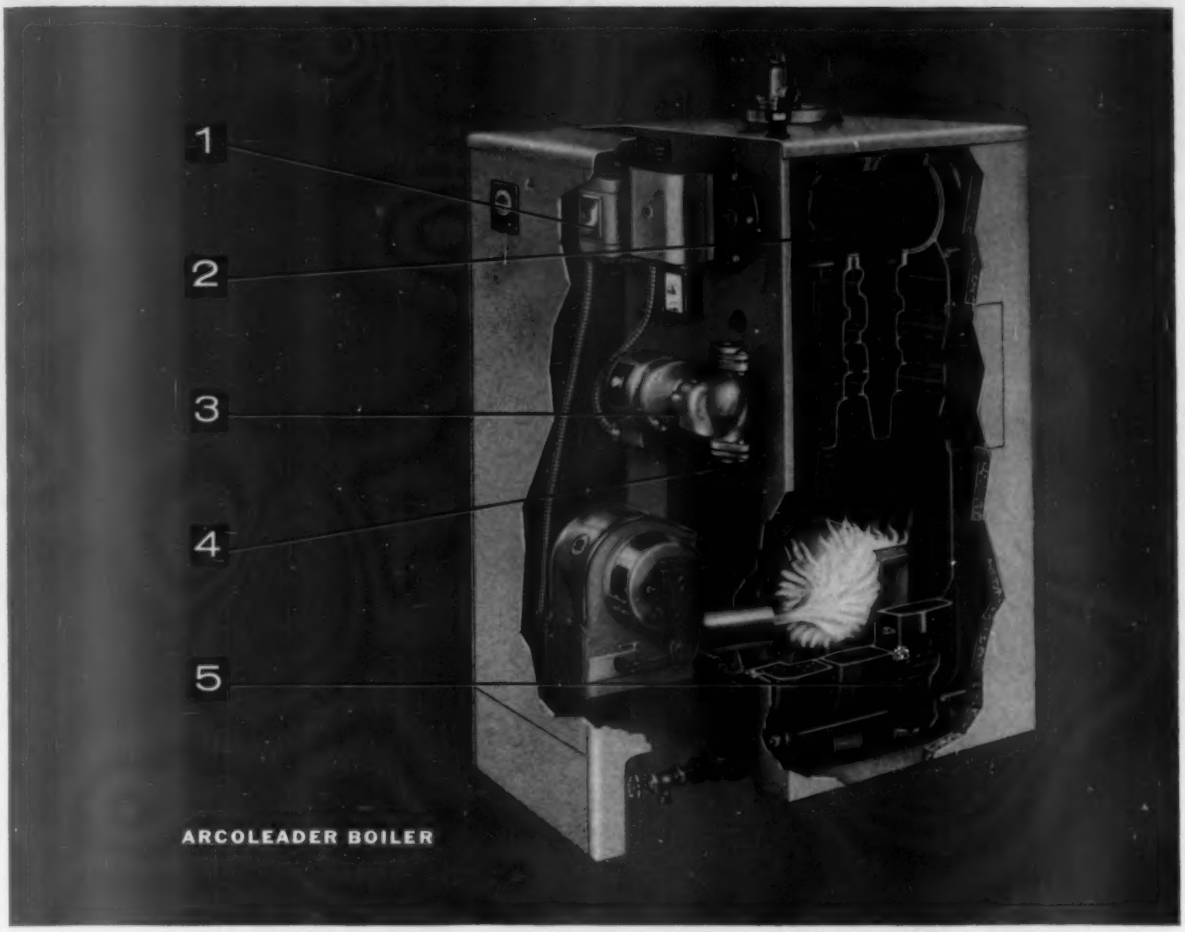
Affected are Magnolia Petroleum Co. in the Southwest, General Petroleum Corp. in the Far West and Mobil Producing Co. in the north-central and Rocky Mountain states. Their operations will become the direct responsibility of Mobil Oil Co.

J. L. Latimer, now president of Magnolia, and R. L. Minckler, now president of General Petroleum, continue with the Mobil organization as senior vice-presidents of Mobil Oil Co.

Also announced were these changes: Fred H. Moore, now executive vice-president of Magnolia, will become vice-president of Mobil Oil in charge of exploration and producing; Henry L. Waszkowski, vice-president of Mobil Oil, will become general manager of the Socony Mobil corporate Exploration and Producing Dept.; R. Rea Jackson, vice-president of Mobil Oil in charge of refineries, will become vice-president in charge of manufacturing and distributing.

Transfer of operations of the three affiliates will start this fall.

Under the new organization plan, Magnolia and General Petroleum producing men and Mobil Producing operation will work through the Mobil Oil Co. producing department; Magnolia refinery at Beaumont and the General Petroleum refineries at Torrance, Calif. and Ferndale, Wash., will become part of the Mobil Oil manufacturing department; Magnolia and General Petroleum marketing operations will be conducted through Mobil Oil's marketing department.



Here are five reasons why American-Standard time-saving, packaged boilers will help you

HANDLE MORE HEATING JOBS

These five time-saving features of the American-Standard packaged Arcoleader will enable you to meet the big demand for boiler replacements and get a larger share of this highly profitable business.

You save labor time because the packaged Arcoleader boiler arrives fully factory-assembled with (1) all controls mounted and pre-wired for immediate connection; (2) a large-capacity, tankless I-W-H rated water heater factory-installed (optional); (3) the circulator factory-mounted.

You save because the Arcoleader oil boiler has (4) all controls, plus the supply and return connections mounted on the front, and (5) wet base construction for installation anywhere without specially built platform or flooring protection.

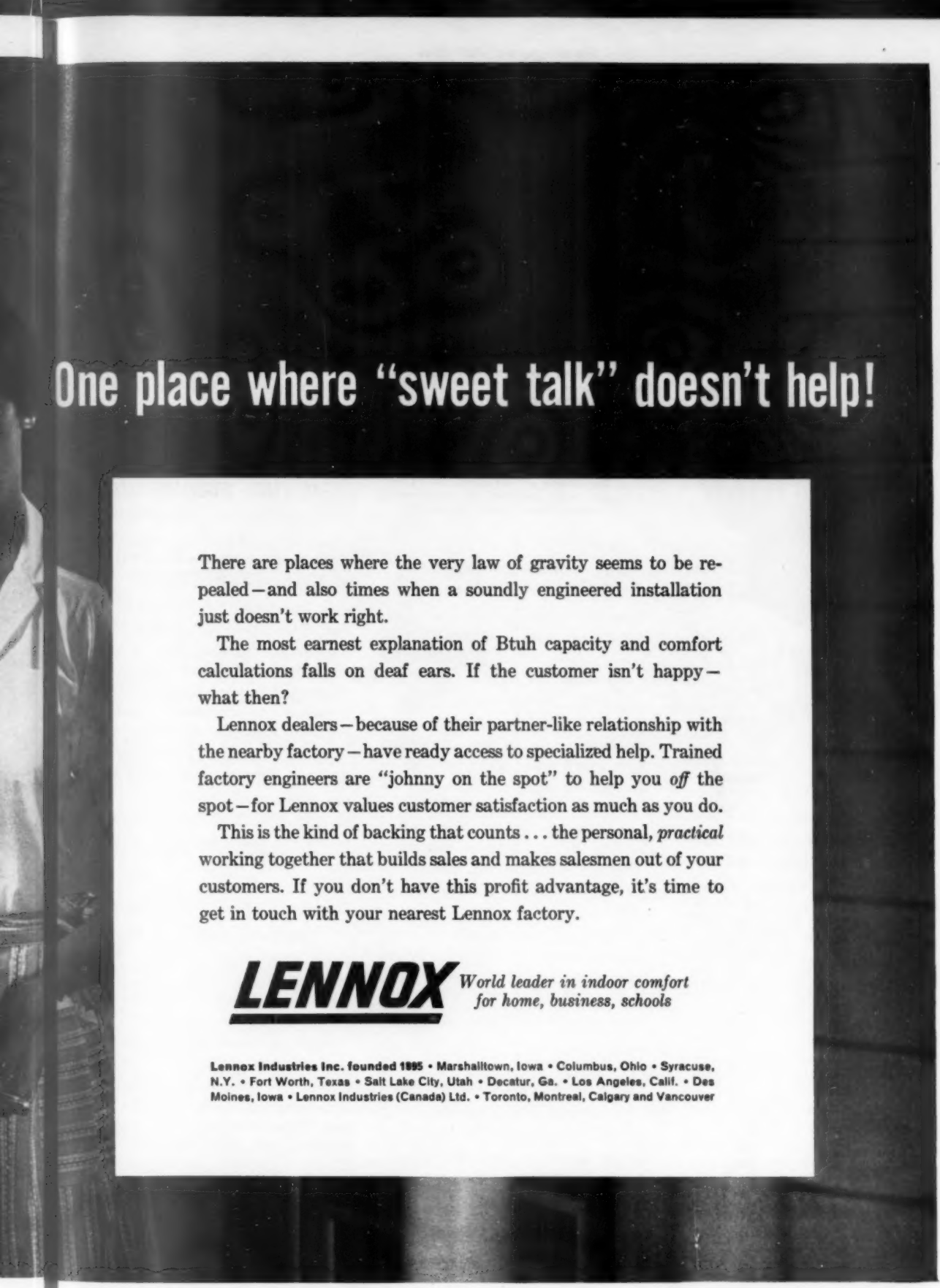
You make more money with American-Standard packaged boilers because speedy-installation features allow you to handle more jobs during the peak replacement season . . . no need to postpone or refuse installations.

Ask your American-Standard distributor about the Arcoleader, with net I-B-R water ratings of 75,000-129,800 Btu/Hr, or write AMERICAN-STANDARD, PLUMBING AND HEATING DIVISION, 40 West 40th Street, New York 18, New York.

AMERICAN-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation

AMERICAN-Standard
PLUMBING AND HEATING DIVISION

fuelfoil & oilheat



One place where "sweet talk" doesn't help!

There are places where the very law of gravity seems to be repealed—and also times when a soundly engineered installation just doesn't work right.

The most earnest explanation of Btuh capacity and comfort calculations falls on deaf ears. If the customer isn't happy—what then?

Lennox dealers—because of their partner-like relationship with the nearby factory—have ready access to specialized help. Trained factory engineers are "johnny on the spot" to help you *off* the spot—for Lennox values customer satisfaction as much as you do.

This is the kind of backing that counts . . . the personal, *practical* working together that builds sales and makes salesmen out of your customers. If you don't have this profit advantage, it's time to get in touch with your nearest Lennox factory.

LENNOX *World leader in indoor comfort for home, business, schools*

Lennox Industries Inc. founded 1895 • Marshalltown, Iowa • Columbus, Ohio • Syracuse, N.Y. • Fort Worth, Texas • Salt Lake City, Utah • Decatur, Ga. • Los Angeles, Calif. • Des Moines, Iowa • Lennox Industries (Canada) Ltd. • Toronto, Montreal, Calgary and Vancouver

NO LOST TIME WITH SPEED-KLEEN CAPS

FROZEN SOLIDLY THEY LIFT OUT QUICKLY!

DELIVER MORE OIL WITH LESS WORK

MAKE MORE PROFIT ON EVERY GALLON

FREEZE PROOF SELF EJECTING CAPS LIFT OFF EASILY—QUICKLY.

For easier, cleaner, faster fills—at any pumping speed—there isn't anything that will help your delivery man as much as a Speed-Kleen nozzle tube and fill pipe fittings. Make his job easier and also save on delivery costs—as much as $5.00 per customer per year—by simply replacing present fill pipe caps with Speed-Kleen fittings.

Don't continue losing profits, write or phone C.G. Eyster at

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.

L. N. Hunter, senior vice-president for engineering, National-U. S. Radiator Corp., presents scholarships to: George A. Mostoller, William G. Reed and Mark Heilman, all of Johnstown, Pa. Dwight E. Greve, second from left, manager of drafting, watches. Mostoller will study electrical engineering at Johnstown College, University of Pittsburgh, Reed and Heilman study mechanical engineering at Pennsylvania State University.

National Radiator awards three more Scholarships

THREE MORE selected high school graduates have received scholarships, covering tuition, books and living expenses, from the National-U. S. Radiator Corp., Johnstown, Pa.

Each year since 1953 executives of the company have picked outstanding high school graduates, who want to become engineers but who have no scholarship help and cannot afford a higher education. The 1959 winners raise to 16 the number of students to receive scholarships; six have completed their studies and received engineering degrees.

The three young men selected this year work for the company during the summer to gain practical experience and are to be offered full-time employment when they complete college.

Pipeline and Terminal to help Sun's heating oil Distribution

DISTRIBUTION of Sun heating oil and gasoline in central and northern Michigan is expected to be helped and uninterrupted winter supplies assured with the construction by Buckeye Pipe Line Co. of a new line from Wayne Junction, Mich., to Owosso, Mich., by way of Flint. Also, Sun Pipe Line Co. is laying a new 8" line to connect between its Toledo, Ohio, to River Rouge, Mich., pipeline and the new Buckeye line.

At the same time, Sun is building a $575,000 bulk terminal at Owosso. When it is completed in October, Sun will begin direct shipments by pipeline to Owosso from its Toledo refinery.

Ravnsbeck acquires Control of Rayfield-Staffco Burner

SOLE OWNERSHIP of Rayfield-Staffco Burner Co. has been acquired by Fred Ravnsbeck, president. The company, which makes a line of commercial-industrial gun-type oilburners, recently moved into new quarters at 1324 Princeton Blvd., Elkhart, Ind.

Among projects announced by Ravnsbeck are plans to introduce a new boiler-burner unit, a new gun burner for No. 5 oil and a new rotary burner for Nos. 5 and 6 oil.

Dielectric Products publishes Handbook of ignition Electrodes

A 48-PAGE HANDBOOK of "Sparktrodes," published by Dielectric Products Co., Inc., Jersey City 5, N. J., contains information and specifications on hundreds of ignition electrode assemblies for domestic, commercial and industrial type oilburners.

Described as the most complete book of its kind ever compiled on oilburner manufacturers' special designs, the Handbook pictures each assembly, catalogued alphabetically by brand name. The model number for each is included.

The book measures 3½" by 7"; includes many associated fittings and instructions for adjusting the assemblies.

(*Please turn to page* 126)

A GREAT LINE OF HEATING SPECIALTIES

A.S.M.E. RELIEF VALVES

174A-740 Series

Boiler safety relief valves for large, high BTU input hot water heating boilers. From 500,000 to 5,250,000 BTU discharge capacity at 30 lbs. Female inlet and outlet. Sizes ¾" to 2" inclusive.

- All-bronze body construction
- Seat located above drain: water can't be trapped and sediment can't foul seat
- Non-mechanical seat-to-disc alignment will not stick or freeze
- Water seal of high temperature-resisting, reinforced nylon isolates spring working parts from water during relief

FEED WATER PRESSURE REGULATORS

No. 560,N56

Automatically supplies water to the hot water heating boiler as required. 560 has built-in check valve and stainless steel strainer. Sizes ½" and ¾". N56 has built-in stainless steel strainer only. Size ½".

- All-bronze body construction
- Stainless steel spring
- Stainless steel integral strainer
- Fast feeding principle

LOW WATER CUT-OFFS

No. 89A (U.L. LISTED)

For gauge glass installation on low pressure boilers. Furnished complete with all fittings necessary to attach to boiler. Large sediment bowl. Maximum steam pressure 25 lbs.

- Quick hookup fittings for easy, sturdy installation
- Float chamber bowl with large mud space—no ledges for mud accumulation
- Heavy reinforced pure copper float
- External gate valve (¾") eliminates hazard of hand burns when flushing float chamber
- Foolproof mercury switch

BOILER WATER FEEDERS

60 Series (Max. Steam Pres. 25 lbs.)
(Up to 5,000 sq. ft. radiation)

No. 60 is gauge glass type boiler water feeder furnished with quick hook-up fittings ½" for gauge glass installation. No. 60LW is LW mercury switch assembly added to provide a combination feeder and cut-off.

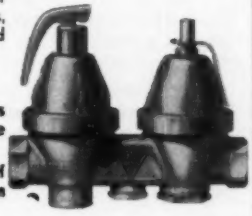
U.L. LISTED

- Heavy reinforced pure copper float
- Mechanically mounted bronze steam seal bellows
- Enlarged straining area with heavy gauge stainless steel screen
- Cool feed valve mounted away from chamber featuring disc-to-metal seating
- Single- or double-throw mercury switch design can be added at any time for low water protection
- ¾" gate type drain valve

DUAL CONTROLS

No. 450

Combination reducing valve and relief valve for hot water heating systems, featuring a built-in check valve and integral strainer. Size ½".



- All-bronze body construction
- Ball type check valve provides high rate of flow with noise-free operation
- Drain connection on bottom of dual control for economical drain pipe hookup
- Stainless steel strainer screen

TEMPERING VALVES

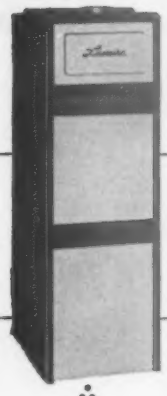
No. 70—70T

For domestic hot water service, automatically mixes cold water with the hot water from heater. Adjustable 120° to 160°. Sizes ½" and ¾" sweat copper connections. No. 70T identical except furnished with screwed connections.

- All-bronze construction
- Extremely powerful thermostat assures dependable control of water temperature
- Leak-proof "O" rings
- Low pressure drop
- Slotted seal cap provides unique adjustment means

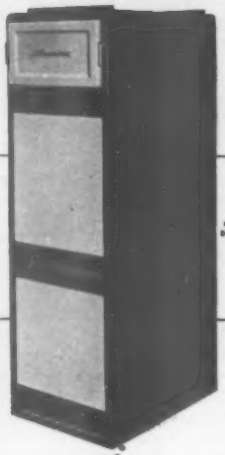
Hot water and steam heating systems—as well as water supply heaters—operate safely and efficiently when you use Watts protection and control devices. Years of engineering experience plus modern research and manufacturing facilities assure you the most advanced designs . . . a full selection . . . reliability. The Watts line—largest and most complete of its kind in the world—is *time proved. Watts Regulator Company, Lawrence, Mass.*

Be sure . . . use **WATTS** Protection and Control Specialties



UPFLOW: Compact Gas Fired and Oil Fired Winter Air Conditioning Units are completely Assembled and Wired, Heavily Constructed and Smartly Styled. Equally adaptable for the basement, the utility room or alcove.

COUNTERFLOW: Gas Fired and Oil Fired Units are completely assembled and wired and have the same compact design, heavy construction and trim styling as the upflow units.



HORIZONTAL: Gas Fired and Oil Fired Furnaces are low and compact for the "tight" spaces—a complete line of Gas or Oil, having the superior qualities of heavier construction.

BASEMENT: Gas Fired and Oil Fired Units. Burn either Gas or Oil with equal efficiency. Handsome Console Cabinet. Assembled and Wired Oil Units — 84,000, 95,000 and 112,000 Btu Output.

MORE PROFIT-PRODUCING ADVANTAGES

...YOURS WITH Luxaire®

If your business is booming, but profits are not, it will pay you to investigate the unique, *money-making* advantages that are available to you with Luxaire!

Luxaire is the deluxe, complete line of Heating and Air Conditioning Units, having the distinctive qualities of uncomplicated design and heavy construction – for which you pay nothing extra!

As a matter of fact, prices of Luxaire Units are consistently lower than those of the other desirable makes of furnaces – lower, even, than for many cheaply constructed units!

This difference is made possible because Luxaire sells in volume, and is manufactured in volume – with advanced production methods that produce substantial cost savings.

Consequently, Luxaire gives you the qualities to command extra profits from replacement and custom-installed jobs, plus the power to compete successfully in price bidding.

Why not eliminate your problem of choosing between excellence and a low price? Get *both*, with Luxaire, from your Luxaire jobber, *today!*

2, 3 or 5 H.P. Air Cooled Condenser-Compressor Unit. Underwriters' Listed for Outdoor Installation.

Upflow Winter Air Conditioning Unit with Circular (Plenum Type) Cooling Coil.

Basement Type Winter Air Conditioning Unit with Circular (Plenum Type) Cooling Coil.

Counterflow Unit with Counterflow Cooling Coil in Accessory Cabinet.

Horizontal Furnace with Duct Type Cooling Coil.

Air Handling Blower and Cooling Coil Unit.

Gas Fired Unit Heater. 5 Sizes.

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Luxaire® HEATING & AIR CONDITIONING UNITS

Ulcers, but good bank Balances

The past Season brought Worries enough, but not over Profits

by Robert Gray

As THE INDUSTRY heads into a new oilheating season it has reason to feel better, quite a bit better, than at the same time last year. True, it is still being hit hard by competitive fuels, but at the same time it's seeing a decided pickup in its own facility.

New oilheating installations are running 16% above those of a year ago which is the first change on the plus side in quite a spell. Coupled with that we have modest price levels which at least are good for the consumer and they certainly have not hurt the fuel-oil distributor. During the past heating season we experienced a new high in volume and profits.

This annual study of fueloil management and operating characteristics is made possible by the very fine industry support on the part of a few hundred fueloil and oilheating marketers who send us their figures from their books.

This is not a light task on their part because they typically look up 70 or 80 items. The number responding to our annual request is large enough to be at least representative of the true fueloil distributor in every major marketing section of the country. By that designation we mean that only a small percent of the group would be jobbers whose principal business is gasoline and who sell fueloil only incidentally.

Again, it should be recognized that the participating companies are a little above the general average in having sufficient industry interest to be willing to help. This does not necessarily mean large companies because the much greater percentages in number of companies have modest volume.

In TABLE 1, we fairly well establish the characteristics of this marketing sample. You'll notice that both in numbers of customers and in their geographic share of total volume they very closely match the actual market as shown in third colum of the table. Specifically, from New England we had 16% of the returns, we had 19% of the total customers, while the actual market represented by New England is 17% of the nation's total.

In the next portion of this table, we see that all of the participating companies sell No. 2 fueloil while lesser percentages sell other characteristic products. Then in the lower part of the table, we divide the cooperating companies by the number of customers they have and then show what share of total volume they represent.

TABLE 1

Sample matches Market

BY NUMBERS OF CUSTOMERS

	Total Co.'s	*Their Share*	*Actual Market*
New England	16%	19%	17%
Mid-Atlantic	40	36	40
South-Atlantic	9	11	6
Midwest	25	25	28
Pacific N. W.	10	9	9
ALL SECTIONS	100%	100%	100%

	This Percent of Companies
Sells No. 2 Fueloil	100%
Kerosene, No. 1	72
Sells No. 4 or No. 5 Residual	27
No. 6 Residual	13
Sells Gasoline	34
Coal	19
Sells Oilheating Equipment	61

Size of Companies

Number of Customers	*Percent of Companies*	*Percent of Total Volume*
Under 500	31%	6%
500 to 999	25	13
1,000 to 1,999	22	21
2,000 to 3,999	14	26
4,000 and over	8	34

TABLE 2

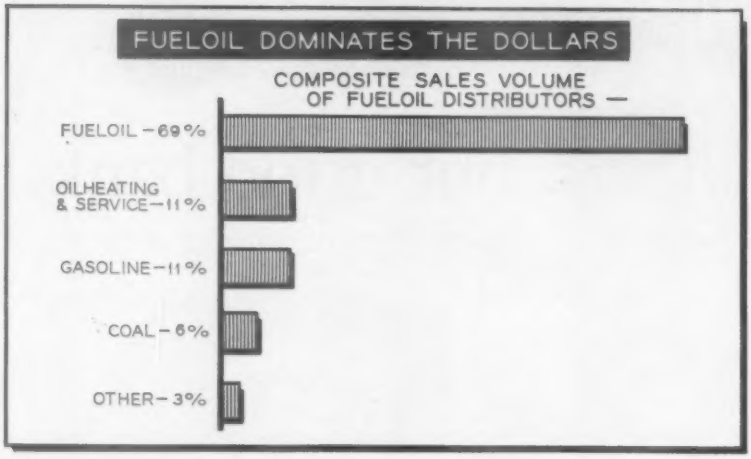
Fueloil is two-thirds of group Sales

	PERCENT OF TOTAL DOLLAR VOLUME					
	Fuel-oil	*Heating Eqpt.*	*Burner Service*	*Gaso-line*	*Coal*	*Other*
NEW ENGLAND						
Large Cities	75%	10%	7%	2%	4%	2%
Medium Cities	71	11	3	4	10	1
Small Cities	71	5	4	10	4	6
All Cities	73	9	5	4	6	3
MID-ATLANTIC						
Metro. New York	81	6	6	2	2	3
Other Large Cities	66	9	7	1	10	7
Medium Cities	65	10	6	10	6	3
Small Cities	65	5	4	20	4	2
All Cities	73	8	6	5	5	3
SOUTH ATLANTIC						
Large-Medium Cities	65	7	7	11	9	1
Small Cities	40	4	1	37	..	18
All Cities	60	6	6	16	7	5
MIDWEST						
Large Cities	68	3	1	18	8	2
Medium Cities	67	1	1	20	5	6
Small Cities	45	2	1	49	1	2
All Cities	63	2	1	25	6	3
PACIFIC N. W.						
Large Cities	63	3	11	10	13	..
Medium Cities	72	13	6	6	3	..
Small Cities	80	1	2	11	6	..
All Cities	69	5	8	10	8	..
U. S. ALL CITIES	69%	6%	5%	11%	6%	3%

As an example, 31% of the companies that helped in this study have fewer than 500 oil customers, but they represent just 6% of the volume. To what degree these ratios are typical of the industry as a whole is not known, obviously, but certainly they do show a nice variety of company sizes and give to the analysis a good cross section of dealer thinking.

Something more than two-thirds of the aggregate dollar volume of the reporting group comes from fueloil. TABLE 2 shows how the fueloil volume stacks up against their sales of heating equipment, burner service, gasoline and coal, these being the principal related products found throughout the industry.

The substantial bulk of the companies studied for this table have more than half of their dollar volume from fueloil. Back in 1954, the U. S. Census of Business published data that indicated that retail operations having more than 50% of their business in fueloil (which they call "fueloil dealers") accounted for 56% of all fueloil sold. We know that the integrated or major companies sell direct to the consumer approximately 24% of the total; the remainder or 20% is principally sold by oil jobbers whose largest volume is in gasoline.


FUELOIL DOMINATES THE DOLLARS
COMPOSITE SALES VOLUME OF FUELOIL DISTRIBUTORS —
FUELOIL – 69%
OILHEATING & SERVICE – 11%
GASOLINE – 11%
COAL – 6%
OTHER – 3%

The main change in this table since a year ago is that heating equipment and burner service now account for 11% of the gross billing compared with 10% in 1958, while gasoline has dropped a point from 12 to 11%.

In most sections of the country the gasoline emphasis is greater among the small cities, which corresponds with the number of oil jobbers in that group.

This would be a good point at which to mention that throughout the study what we call a "small city" is below 25,000 population; the medium city is between 25,000 and 250,000.

Fueloil distributors are taking a more active interest in the sale of oilheating equipment. A few more companies are doing it and their share as oil companies of total oilheating installations is growing considerably. In TABLE 3, we see that 61% of fueloil distributors sell oilheating equipment and that during the past year they are estimated to have sold 56% of all oilheating installations. There are two ways to look at this. Their percent of total installations would naturally rise to the extent that heating and plumbing dealers may prefer to sell equipment burning other fuels. There has been a trend in that direction.

On the other hand, we do know that total installations are up, so it is quite probable that the oil companies are putting forth more sales effort. In both the sale and servicing of oilheating, there are traditional geographic variations. The combination type company dominates the market throughout the East, less so in the South and West.

In the servicing end, the table shows that 70% of the oil companies take the service responsibility, and they account for 64% of all equipment maintenance. There is considerable merit in having the service done by the oil man because he has the most logical reason

TABLE 3

Oil Men Sell, Service more Equipment

	Percent who sell Oil-heating	*Avg. No. Installations Sold*	*Oil Companies' share of all Installations*	*Percent who service Oil-heating*	*Oil Companies' share of All Service*
NEW ENGLAND					
Large Cities	91%	112	79%	95%	85%
Medium Cities	94	69	67	93	81
Small Cities	62	12	53	71	67
All Cities	86	79	70	89	80
METRO. NEW YORK	74	23	84	79	87
OTHER MID-ATLANTIC					
Large Cities	82	55	77	86	83
Medium Cities	81	21	54	98	81
Small Cities	61	17	36	72	57
All Cities	78	37	62	87	77
SOUTH ATLANTIC					
Large-Medium Cities	56	33	57	72	26
Small Cities	17	30	8	52	24
All Cities	48	32	47	68	26
MIDWEST					
Large Cities	37	30	36	44	55
Medium Cities	29	16	14	46	19
Small Cities	31	12	11	26	16
All Cities	33	22	24	41	36
PACIFIC NORTHWEST					
Large Cities	28	58	86	76	78
Medium Cities	63	111	42	72	57
Small Cities	33	8	43	48	55
All Cities	40	64	64	69	67
1959 ALL SECTIONS	61%	40	56%	70%	64%
1958 ALL SECTIONS	60	41	48	69	63

to keep the customer happy with the best oilheating at reasonable cost.

Apart from their oilheating sales and service, about one-fifth of the fueloil distributors also sell central air-conditioning jobs. TABLE 4 shows quite a geographic diversity, but the total comes to 21% of companies. They sold in the past year an average of 12 central cooling installations.

TABLE 4

Oil Men sell Airconditioning

	Percent who sell cooling	*Average number of installations sold*
New England	23%	4
Metro. N. Y.	29	23
Other Mid-Atlantic	27	20
South Atlantic	30	15
Midwest	11	4
Pacific N. W.	7	5
1959 ALL SECTIONS	21%	12
1958 ALL SECTIONS	22	11

It is quite important that fueloil companies with heating should sell cooling equipment because it is becoming obvious that the tie-in between the two will be increasingly important in the early future.

Among the industry activities of special significance these days is the large number of cooperative campaigns functioning throughout the country. Notice in TABLE 5 that we show, first, regular company advertising of its own product and brand. This does not refer to major oil companies, but rather the local independent fueloil distributors. That point is carried in fact throughout the entire analysis.

TABLE 5

More Companies are Advertising

	COMPANY ADVERTISING	
	Percent of Companies that Advertised	*Avg. spent by them per Customer*
New England	93%	$2.20
Metro. New York	94	2.30
Other Mid-Atlantic	95	1.89
South Atlantic	98	1.74
Midwest	97	1.16
Pacific Northwest	90	2.91
1959 ALL SECTIONS	95%	$1.90
1958 ALL SECTIONS	88	1.93

	COOPERATIVE ADVERTISING CAMPAIGNS	
	Percent of Companies Participating	*Avg. spent by them per Customer*
New England	46%	$ .55
Metro. New York	74	.31
Other Mid-Atlantic	43	.29
South Atlantic	75	.45
Midwest	36	.28
Pacific Northwest	79	.56
1959 ALL SECTIONS	52%	$ .37
1958 ALL SECTIONS	48	.35

We see for example that 95% of the reporting companies did some advertising during the past year and for this they spent an average of $1.90 per existing fueloil customer. This shows quite an increase in the number of companies, but a slight decrease in the amount spent per unit.

In the lower part of the table we see that 52% of the companies taking part in this study are putting money into local cooperative campaigns sponsored by the National Fueloil Council. Their investment in these campaigns is 37¢ per fueloil customer. We found some companies putting in as much as a dollar a customer. On the other hand, this 37¢ figure is pretty close to the conventional formula used in most programs of $250 a million gallons. By no means all of the fueloil distributors in areas having programs take part in their financial support. Among all those helping in this study we find 71% being located in cities with cooperative campaigns but, as we saw, just 52% are supporting them now.

When we asked whether these oil men believe that campaigns up to now have done some good for the industry in getting new customers and holding old ones, 76% vote Yes; another 16% vote No; while 8% have no opinion. This attitude is important enough to relate geographically.

In New England, 88% believe that the campaigns are helping; voting No are 7%; and No Opinion, 5%. In Metropolitan New York, 79% vote Yes; 15% vote No; and 6% No Opinion. Other Mid-Atlantic states vote 72% Yes; 19% No; and 9% undecided. The South Atlantic states vote 87% Yes; 8 No; and 5% No Opinion. The Midwest makes the lightest showing with 61% Yes; 27% No and 12% No Opinion. The Pacific Northwest with 92% voting Yes, none voting No and 8% with no opinion supplies the strongest supporting viewpoint.

In the regular monthly study published elsewhere in this issue, we found 84% saying that the programs were helping. There is no conflict between that figure and the 76% opinion in this much larger annual study since the monthly reporting group is more apt to be found in the larger centers having cooperative programs.

Of incidential interest to this study, although not taken from this questionnaire, is the pie chart showing how oilheating installations are changing in emphasis in the direction of replacements of old equipment. We've not been doing as well in the new home market because our equipment costs the builder more, and of course, the conversion market from coal to oil is getting smaller. Replacements are getting very important largely because of the increasing age of the average burner.

Fueloil distributors with oilheating service departments have often complained about the amounts they lose in this activity. TABLE 6 shows that across the board the customer spent for service $20.44 and it cost the oil company $22.63, so there was a loss of $2.19 per account. This is a significant

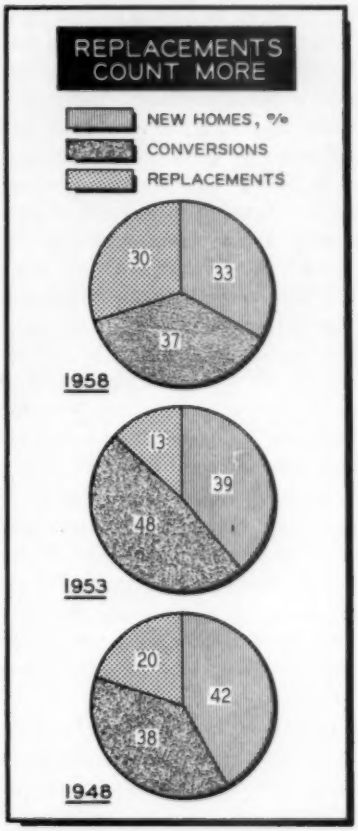


TABLE 6

Service Loss $2.19 per Customer

	PER CUSTOMER		
	Service Income	*Loss*	*Service Cost*
NEW ENGLAND			
Large Cities	$23.67	$ .67	$24.34
Medium Cities	18.53	2.41	20.94
Small Cities	17.06	3.19	20.25
All Cities	21.33	1.49	22.82
METRO. N. Y.	24.49	4.51	29.00
OTHER MID-ATL.			
Large Cities	24.16	1.57	25.73
Medium Cities	22.14	5.25	27.39
Small Cities	14.42	2.26	16.70
All Cities	22.31	2.15	24.46
SOUTH ATL.			
All Cities	20.41	.61	21.02
MIDWEST			
Large Cities	21.53	.87	22.40
Medium Cities	13.78	1.40	15.18
Small Cities	13.09	4.16	17.25
All Cities	18.19	1.45	19.64
PACIFIC N. W.			
All Cities	17.07	1.00	18.07
ALL SECTIONS			
Large Cities	22.54	1.64	24.18
Medium Cities	18.63	3.03	21.66
Small Cities	15.09	2.74	17.83
All Cities	$20.44	$2.19	$22.63

amount, but there are compensations.

Getting and holding new customers is often easier when an oil distributor operates his own service department as we can see on a broad base in TABLE 7. In other words, the majority of fueloil distributors in our study have their own service departments not for profit reasons but rather to provide the best oilheating and good customer relations.

In TABLE 7 there is a reasonable correlation between the percent of companies offering service and their customer turnover. This is not too exact, but there are indications. Notice first that the average number of customers lost for any reason during the past season was 6.8%. Incidentally, nearly all of the companies were able to replace them with new accounts, but this table does show the turnover rate.

In New England where 89% of companies have service departments customer loss was 6.4%. The Midwest where only 41% of the companies supply burner service, we find the turnover rate to be 8.7%, in fact in the large Midwest cities the turnover is 9.4%.

Getting back to TABLE 6, it should be noted that the figures on service loss have taken into account the fact that some companies showed a profit rather than a loss. In other words, the figures in the table are the net loss after the profit companies were subtracted from the original loss group.

To fueloil distributors in central states not familiar to East Coast operation, TABLE 8 may seem strange since it shows that only a little over half of the eastern marketers have their own bulkplants. In the tidewater markets, it is usually cheaper to load the company's trucks at a primary water terminal owned by someone else.

In the large Atlantic Coast cities, suitable ground for a bulkplant would also be very costly unless the company was able to run a lot of product through the plant every day.

The size characteristics of the fueloil distributors represented in this analysis are shown in TABLE 9. The average company has 1,601 customers for No. 2 oil and during the past heating season they burned 1,657 gallons, if the commercial No. 2 accounts are added in with the residential. You'll notice in the upper part of the table, we have separated the No. 2 residential user from the commercial-apartment type. Then on the gallonage we show the two varieties separately followed by a combined total. One

TABLE 7

Servicing Companies have less Turnover

	Percent of Companies with Service	*Percent of Customers Lost Any Reason*
NEW ENGLAND		
Large Cities	95%	6.0%
Medium Cities	93	8.0
Small Cities	71	5.2
All Cities	89	6.4
MID-ATLANTIC		
Large Cities	81	6.3
Medium Cities	98	5.7
Small Cities	72	4.9
All Cities	84	5.8
SOUTH ATLANTIC		
Large-Medium Cities	72	7.0
Small Cities	52	5.7
All Cities	68	6.7
MIDWEST		
Large Cities	44	9.4
Medium Cities	46	6.9
Small Cities	26	9.5
All Cities	41	8.7
PACIFIC NORTHWEST		
Large Cities	76	4.6
Medium Cities	72	8.2
Small Cities	48	4.7
All Cities	69	5.7
U. S. AVERAGE	70%	6.8%

TABLE 8

74% operate own Bulkplants

	No. 2 Oil	*No. 1 Kero.*	*Residual*
New England	56%	54%	4%
Metro. New York	53	12	12
Other Mid-Atlantic	73	65	10
South Atlantic	100	96	8
Midwest	97	94	9
Pacific N. W.	59	45	10
1959 ALL SECTIONS	74%	62%	9%
1958 ALL SECTIONS	72	64	8

thing important to note in the listing of customers is that not all companies sold all of the fueloil types mentioned. Thus, each individual figure must stand on its own. For example, when we show that the average New England company had 214 Kero, No. 1, customers this refers only to those companies selling Kero. Again in New England, not all companies, by any means, sell No. 6 residual oil, but among those that did sell it there was an average of 66 customers.

Now we come to the economic or dollar-and-cents phase of fueloil distribution. It might be well here to state the period or time on which this whole analysis was based. Naturally, there will be some confusion with calendar years, but not much.

The fueloil distributor, more often than not, uses a fiscal basis, with his year matching the season rather than the calendar. Thus we have asked the companies to give us their figures reflecting as nearly as possible the past full season from mid-summer to mid-summer. Naturally, if their accounting year ends in the summer they would supply figures as of that date.

TABLE 10 discloses a healthy state of mind throughout most of the industry. We see that 68% of the companies consider margins about right while 4% actually think that they are too high; the remaining 28% say they are too low. When you recall that only a few years ago we had a lot of pressure on the point that margins were inadequate, the change in attitude is significant. As recently as ten years ago, there were speeches at large conventions designed to show why margins were much too low. Today, most companies feel that too much margin encourages give-away tactics and also handicaps the industry's sales in view of the intense competition from gas.

TABLE 9

Companies Average 1,601 Customers for No. 2 Oil

Customers	New Eng.	Metro. N. Y.	Other Mid-Atl.	South Atl.	Mid-west	Pacific N. W.	All Sec.
No. 2 Residential	1,502	1,426	1,461	1,389	1,525	1,791	1,505
No. 2 Com'l-Apt.	73	106	116	64	104	72	96
Kero, No. 1	214	97	138	1,092	302	616	290
No. 4-5 Residual	38	57	30	30	34	118	45
No. 6 Residual	66	110	52	8	8	10	46

Average Consumption

	GALLONS PER CUSTOMER, SEASON 1958-59						
	New Eng.	Metro. N. Y.	Other Mid-Atl.	South Atl.	Mid-west	Pacific N. W.	All Sec.
Residential, No. 2	1,614	1,924	1,421	1,078	1,312	1,026	1,458
Com'l-Apt., No. 2	6,414	7,140	4,100	2,886	3,959	2,481	4,785
Comb. Types, No. 2	1,792	2,214	1,580	1,142	1,447	1,071	1,657
Kero, No. 1	697	900	804	697	915	812	829
No. 4-5 Oil	11,065	29,145	56,612	10,000	30,377	13,055	31,662
No. 6 Oil	..	..	..	..	..	..	167,159

Driver wages are up again as could be expected and as shown in detail in TABLE 11. In the past some oilmen have misunderstood this table, or we might say wage negotiators have misunderstood it. The important thing to notice is that the heading "best men" refers to the average figure of the many companies participating and represents for each the highest individual pay scale. The next column showing lowest rates should be considered the same way.

TABLE 10

Most think Margins are O.K.

	PERCENT OF COMPANIES SAY THEY ARE		
	about right	too high	too low
NEW ENGLAND			
Large Cities	82%	12%	6%
Medium Cities	92	..	8
Small Cities	52	..	48
METRO. NEW YORK	66	7	27
OTHER MID-ATLANTIC			
Large Cities	67	..	33
Medium Cities	62	..	38
Small Cities	52	3	45
SOUTH ATLANTIC			
Large-Medium Cities	53	..	47
Small Cities	59	..	41
MIDWEST			
Large Cities	74	..	26
Medium Cities	59	12	29
Small Cities	51	..	49
PACIFIC N. W.			
Large Cities	83	17	..
Medium Cities	61	..	39
Small Cities	76	..	24
ALL SECTIONS			
Large Cities	72	5	23
Medium Cities	67	4	29
Small Cities	55	..	45
ALL CITIES 1959	68%	4%	28%
ALL CITIES 1958	69	2	29
ALL CITIES 1957	47	6	47

It is undoubtedly good for the industry to pay our drivers fairly well so that we can get high type men. They are so often our principal contact with the world outside of the office.

We find in the large cities an average of 38% of the drivers belong to unions, in the medium cities 18%, and in the small cities 5%. The complete average for the industry is 28% of the drivers unionized.

One reason for the moderate union coverage is the fact that fueloil delivery lends itself rather conveniently to incentive payment. We find 25% of the reporting group having one or another kind of incentive programs. The word "incentive," we believe, has been used rather loosely to reach a score so high. With some companies it would be just a Christmas bonus; with some perhaps it is a retirement program, again it could be a gallonage basis, or any number of other approaches. It is clear that a fourth of the companies do more for their drivers than the straight hourly wage.

While exploring the dollar side of the business, TABLE 12 shows the relative popularity of bracket pricing. It seemed to reach its peak a year ago and then fell back by 4% this year. What we have in mind here is the company that charges typically a half cent less to the customer with a 550 gal. or larger tank. If such a customer is not on automatic delivery, the price break is often made at 400 gals.

There is always some question as to the soundness of bracket pricing. In the typical community where three-fourths of the tanks are small it is hard to make the half cent differential pay out. In other words, if the number of large tanks is so few as to cause special trips to the area when they come up for filling on the degree day-cards, then there could not possibly be a saving. If there is a high concentration of large tanks as for example some coun-

TABLE 12

Bracket Pricing Less Popular

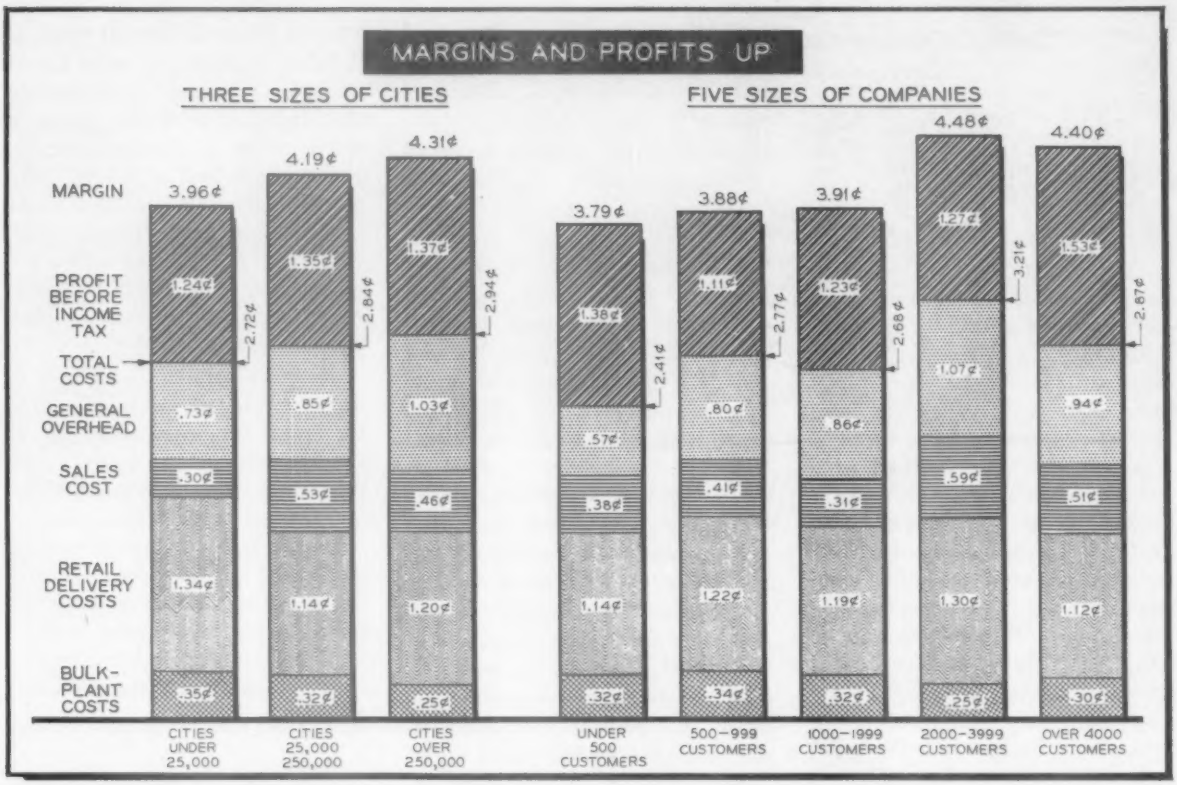
THIS PERCENT OF COMPANIES CHARGE LESS FOR LARGE DROPS

	Large Cities	Medium Cities	Small Cities	All Cities
	PERCENT			
New England	62	64	38	58
Metro. New York	41	..	..	41
Other Mid-Atlantic	18	50	42	32
South Atlantic	0	0	17	3
Midwest	46	38	13	37
Pacific N. W.	83	100	100	92
1959 ALL SECTIONS	42	51	36	44
1958 ALL SECTIONS	52	45	37	48
1957 ALL SECTIONS	44	26	21	37

TABLE 11

Driver Wages show another Increase

	LARGE CITIES		MEDIUM CITIES		SMALL CITIES	
	Best Men	Lowest	Best Men	Lowest	Best Men	Lowest
New England	$2.19	$2.12	$1.92	$1.63	$1.78	$1.50
Metro. New York	2.56	2.50	..	..	..	..
Other Mid-Atlantic	2.33	2.07	1.88	1.71	1.92	1.72
South Atlantic	1.48	1.09	1.44	1.27	1.82	1.58
Midwest	2.50	2.35	2.39	2.07	2.25	2.19
Pacific Northwest	3.12	2.33	2.46	2.42	1.95	1.92
1959 All Sections	2.42	2.20	2.09	1.86	2.00	1.85
1958 All Sections	2.28	2.18	1.98	1.79	1.82	1.67
1597 All Sections	2.21	2.05	1.90	1.68	1.73	1.56
1956 All Sections	2.14	1.98	1.93	1.68	1.75	1.56
1955 All Sections	1.91	1.72	1.70	1.49	1.65	1.36
1954 All Sections	1.97	1.80	1.75	1.65	1.77	1.62
1953 All Sections	$1.78	$1.47	$1.53	$1.37	$1.58	$1.49



ties in New Jersey then the saving could run well above a half cent. We're not thinking here of the typical commercial discount where the distributor may allow one or as much as two cents for a really large tank. Depending upon the circumstances the savings here can be very real.

It is interesting to compare the opinions on margins by what the margins actually are in various areas as disclosed in TABLES 13 and 14. There's not too much to be drawn by way of conclusion from such a comparison. Looking over the work sheets here's a company with a margin of 5.6¢ saying it is too low, and another with 3.7¢ saying it is too high. Naturally, any such comparison must take into account the cost characteristics of the market.

Again this year we show margins, costs and profits in the vertical bar charts to bring you the differences inherent in city sizes as well as company sizes. We also carry again the five year progression with each bar based on the total companies in the group.

To compare your own operation with industry experience you might well select two bars representing first your size of city and next your size of company and average the two. From the result of this you could pretty well check your own cost and margin conditions against other companies similarly situated.

Notice in the complete chart for 1959 the margin of 4.23¢ is well above last year's 4.11¢, and the profit of

TABLE 13

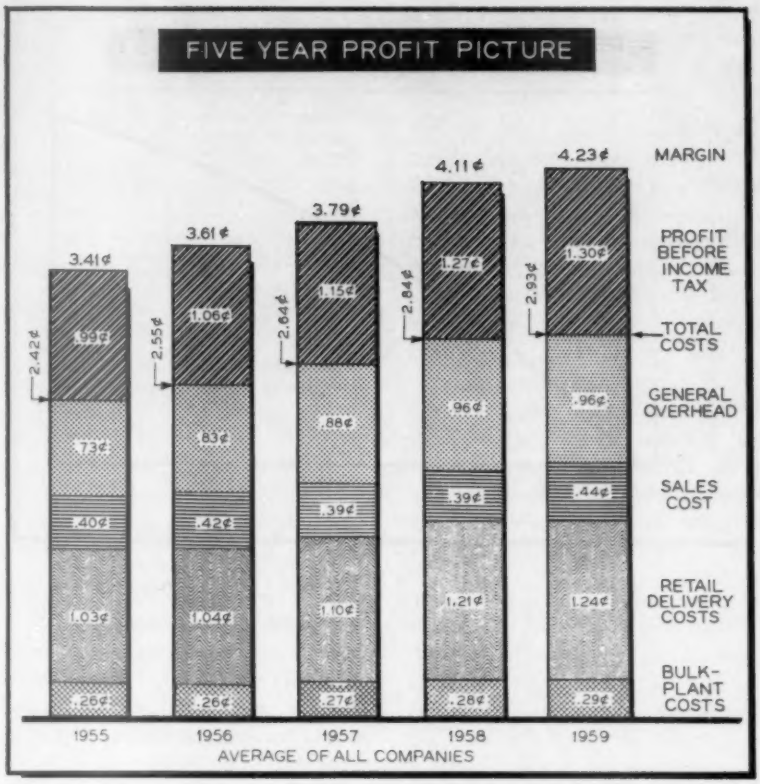
Fueloil Economics by Regions

CENTS PER GALLON	*New Eng.*	*Metro. N. Y.*	*Other Mid-Atl.*	*South Atl.*	*Mid-west*	*Pac. N. W.*	*All Sec.*
Bulkplant Cost	.30	.29	.24	.42	.33	.18	.29
Delivery Cost	1.17	1.40	1.11	.97	1.26	1.53	1.24
Selling Cost	.42	.44	.32	.37	.41	.91	.44
General Overhead	1.20	1.12	.91	.54	.82	.99	.96
Total Cost	3.09	3.25	2.58	2.30	2.82	3.61	2.93
Margin with Bulkplant	4.65	4.26	3.88	3.49	4.08	5.03	4.23
Profit	1.56	1.01	1.30	1.19	1.26	1.42	1.30
Margin without Bulkplant	4.60	4.02	3.68	..	..	5.24	4.05
Profit	1.81	1.06	1.34	..	..	1.81	1.41

TABLE 14

Margins continue their Climb

	—WITH BULKPLANT—			—WITHOUT BULKPLANT—		
	Large Cities	*Medium Cities*	*Small Cities*	*Large Cities*	*Medium Cities*	*Small Cities*
New England	4.65¢	4.89¢	4.41¢	4.63¢	4.71¢	4.46¢
Metro. New York	4.26	..	..	4.02	..	..
Other Mid-Atlantic	4.07	3.86	3.66	3.81	3.23	3.96
South Atlantic	..	3.74	3.11	..	..	..
Midwest	4.20	4.21	3.80	..	..	..
Pacific N. W.	5.04	4.53	5.50	5.62	5.79	4.00
1959 ALL SECTIONS	4.31¢	4.26¢	4.02¢	4.32¢	3.99¢	4.09¢
1958 ALL SECTIONS	4.06	4.16	4.02	3.83	..	3.89



1.30¢ is a little above last year's 1.27¢. Of course, these profits are net earnings before income taxes.

We have for the first time this year a special chart showing the relation between the wage rates of fueloil drivers and the distributors total cost of operation in cents per gallon. The answer is a curve, showing that there is no absolute parallel between the two, but pretty generally the driver wage is a good index to the total cost of doing business. We've not attempted in this chart to cover the complete range of either wage rates or costs, but rather stayed within the limits of the large majority of companies. (Page 68.)

In cities where driver wages are high, all other personnel will be relatively high priced and so will construction costs, taxes and other expenses.

TABLE 13 brings out an interesting point. The operator with a bulkplant this last season had margins no better on the average in some areas than the operator without a bulkplant. This is influenced very much by New England and the Pacific Northwest. It is not uncommon in these days of surplus product for a large fueloil distributor to get concessions amounting to as much as the typical bulkplant differential. This condition can be expected to stay with us until supplies tighten up across the industry.

Details of fueloil trucks and some customer characteristics related to them are in TABLE 15. This table like a number of others is the same each year for the purpose of showing trends to industry men who may be interested in such things.

There is not a very great change from year to year. But the number of customers served per truck gets larger as the trucks themselves are larger and their output correspondingly greater.

There always is some question as to whether the average gallon per drop should be higher or lower depending upon the marketers' philosophy.

In the last few years, a number of larger independents have gone to a combination of degree-day and route system under which they fill every customer's tank in a neighborhood at such time as a key account would come to light on a degree-day basis. Thus, the average drop size would be smaller, but the driving would be less and often times the output higher in gallons delivered per hour.

A study on this last point finds some interesting development in TABLE 16. In the past few years there has been an increasing interest in higher pumping speeds, often with the use of centrifugal pumps. In getting the figures this year, we again asked for the pumping speeds used and gph output based on the month of January.

You would expect a smooth progression in output as the pumping speed increased. There was actually a splendid improvement moving up the scale, but there were some notches in the

TABLE 16

Gallons delivered per Hour related to Pumping Speeds

Pumping Speed	*Companies Using, Percent*	*Gallons per Hour*
25 gpm	4%	475 gph
30	4	567
35	6	526
40	17	501
45	13	545
50	20	558
60	19	629
70	6	681
75	3	674
80	4	642
90 gpm	4%	820 gph

TABLE 15

352 Customers Served by a Truck

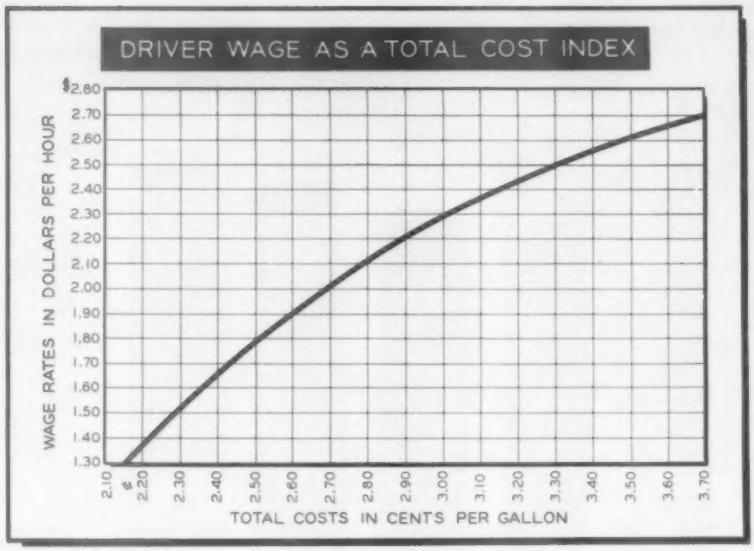
Trucks operated per distributor	*Large Cities*	*Medium Cities*	*Small Cities*	*All Cities*
No. 2 Oil	5.7	2.7	2.4	4.4
Kero. No. 1 Oil	1.6	1.4	1.4	1.5
Residual Oil	3.5	1.7	1.3	2.7
Over-the-Road Transports	3.1	2.4	2.2	2.8
ALL TYPES	8.2	4.7	3.9	6.5
Customers served per truck, No. 2 Oil	347	411	245	352
Average Gallons per drop				
No. 2 Oil	203	198	224	206
Kero. No. 1 Oil	113	82	87	102
No. 4-5 Residual	3,262	3,952	3,779	3,529
No. 6 Residual	4,695	4,628	..	4,673

curve. When you think of it, it is obvious that to double a pumping rate does not double the hourly output of the truck, since only a small part of the time is spent pumping oil.

Then, of course, there are variable factors among companies, with no two exactly alike as to the characteristics of their operation. One company may have a large concentration of say 5,000 customers within an eight mile radius, while another in a more rural setting will go as far as 35 miles and have all told only 1,000 customers. We know of specific companies matching those two descriptions. To double the pumping speed would help the concentrated company a great deal more than the spread out operation.

Notice in the center column of the table that the greatest number of companies uses a 50 gpm pumping rate with 60 next most popular.

The practice of having fueloil customer tickets computed in the office rather than by the driver is growing at a great rate. See in TABLE 17 that a full fourth of the companies this year do not compute the tickets at time of delivery, but rather just get the meter readings stamped on the ticket and then have the rest of the work done by an office girl with the billing ticket being mailed to the customer. In dealer management conferences in the past two or three years this activity has been very thoroughly explored and certainly has taken root. Companies that tried it have found it a great time saver. Unfortunately, within the past few weeks the Bureau of Weights and Measures in Washington has issued a memorandum to the effect that fueloil drivers should always compute the ticket and leave it at the house at the time of delivery. The Bureau has no legal authority but it carries a lot of weight in its recommendations to individual state legislatures and most of them adopt its recommendations. It would be a serious injury to fueloil distribution if this attitude should get well planted into state legislation, because certainly our industry wants it the other way.



If a driver wants to cheat a customer, which incidentally is pretty rare, he could find some way to do it other than his computation of a meter ticket. The industry must seriously try to get the attitude of the Bureau changed.

In TABLE 18 we show by sections of the country practices relating to seasonal use of oil truck drivers. In large cities only 42% of the drivers are kept through the summer. In bringing to the reader a distribution by city sizes as well as geographic regions, it is possible to know the practices that apply in case you get into any discussion with drivers on the subject. From the individual driver's standpoint, he'd have steadier employment in small cities and steadiest of all in the South Atlantic area, although his income would be considerably below that of large cities in the North.

There has been a general feeling that major companies are taking an increasing share of heating oil distribution direct to the user. We all know of instances where they have bought out large fueloil distributors and started supplying the customers. On the other hand, this study certainly indicates no shift in the national ratio from last year to this and very little change in the past five years.

There is some question as to the major company's ability to hold all the accounts when it buys out a distributor. Again, some major companies are getting out of direct retail operation in certain markets where it did not pan out as well as expected.

The sectional percentages vary somewhat from year to year, but when they are all put together the national figure comes out about the same.

In the lower part of the same TABLE 19, we find 61% of the fueloil distributors showing major company brands on their trucks. This compares with 58% last year. The practice is most prevalent in the Pacific Northwest.

The practice of using two-way radio on oil and service trucks has been moving up pretty rapidly to a very sig-

TABLE 17

Drivers don't leave Tickets

	Percent of Companies that compute and mail ticket from office
New England	30%
Metro. New York	32
Other Mid-Atlantic	29
South Atlantic	43
Midwest	15
Pacific Northwest	8
1959 ALL CITIES	25%
1958 ALL CITIES	13

TABLE 18

... Half of Drivers all Year

	Large Cities	*Medium Cities*	*Small Cities*	*All Cities*
	PERCENT			
New England	33	37	73	42
Metro. N. Y.	40	..	..	40
Other Mid-Atlantic	56	47	71	56
South Atlantic	47	47	95	57
Midwest	37	57	69	49
Pacific N. W.	40	50	47	44
ALL SECTIONS	42	49	70	50

TABLE 19

Majors Sell 24% of Retail Volume

	Percent of total No. 2 fueloil sold at retail by major companies
New England	21%
Metro. New York	23
Other Mid-Atlantic	24
South Atlantic	14
Midwest	34
Pacific Northwest	3
1959 All Sections	24%
1958 All Sections	24
1957 All Sections	25
1956 All Sections	24
1955 All Sections	25
1954 All Sections	22
1941 All Sections	29%

	Distributors showing major Brands
New England	42%
Metro. New York	47
Mid-Atlantic	63
South Atlantic	65
Midwest	71
Pacific Northwest	86
ALL SECTIONS	61%

nificant level today. The reporting oil men told us how many of each type of truck was equipped with radio. If we apply the number of radios to only the No. 2 oil trucks, we find that 24.6% have the radio. On the other hand if we apply the number of radios to trucks of all types including kerosine, residual and over-the-road transports, then the number equipped with radio represents 17.6%. Chances are that the right answer is midway between or slightly over 20%.

Radios are also widely used on oil-heating service trucks. In fact many oil men feel that they have their best applications in service work. The reporting companies have 48% as many service trucks as they do oil trucks. The information then shows that 28.2% of the service trucks are equipped with two-way radio.

Delivery refinements as shown in TABLE 20 cover automatic deliveries and fill signals. On each facility the trend is upward. Nearly all fueloil distributors, but not all of their customers, want them. Some folks actually like to watch a tank gauge and order when ready. The tank fill signal will keep growing in popularity as higher pumping speeds move ahead in the market. With a tight fitting fill and fast pump it is almost impossible to operate without fill signals. Either that or the driver becomes extra cautious, which defeats the purpose of the fast fill arrangement.

A new table this year, number 21, checks customer credit experiences. We learn, for example, that across the board 8%, or one in 12, fuel customers pays cash on delivery. The ratio is quite high in the South Atlantic States, particularly in the small cities. Again it is higher in the Midwest than in most Eastern sections. We find occasional companies will not handle any C.O.D. business. They figure that it takes so much driver time with the expensive trucks standing idle that it loses them money. This attitude is not as prevalent today as it was ten years ago, but it is still in evidence.

We saw back in TABLE 7 that 6.8% of oil customers are lost during the year for any or all reasons. Of this number, we now see in TABLE 21 that 2.2% were dropped for credit. This would probably indicate that a customer did not wish to be on a C.O.D. basis, and the company was afraid of him on open account.

In this same table, we show that the numbers of customers on equalized monthly payments for oil or so called "budget plans" has reached 20% of all customers. It has been a long slow climb, but the percentage does increase pretty regularly, however at a small pace from year to year.

In general, the experience with monthly payment projects has been disappointing to the oil men, not because they don't work well but because too few customers will use them.

In the competitive fuel picture, we find from TABLE 22 a composite opin-

(Please turn to page 160)

TABLE 20

Delivery Refinements

	PERCENT OF FUELOIL USERS	
	On automatic Delivery	Have fill Signal
New England	81%	92%
Metro. New York	90	81
Other Mid-Atlantic	82	81
South Atlantic	51	3
Midwest	64	34
Pacific N. W.	80	..
1959 ALL SECTIONS	76%	58%
1958 ALL SECTIONS	73	55

TABLE 21

Customer Credit Relations

	Percent on C.O.D.	Percent dropped for Credit	Percent on Budget Payment
NEW ENGLAND			
Large Cities	5%	1.3%	28%
Medium Cities	9	2.2	19
Small Cities	9	2.8	16
All Cities	7	1.9	23
METRO. NEW YORK	3	1.5	16
OTHER MID-ATL.			
Large Cities	7	1.8	23
Medium Cities	4	1.8	17
Small Cities	6	2.6	19
All Cities	6	2.0	21
SOUTH ATLANTIC			
Large-			
Medium Cities	14	3.5	25
Small Cities	32	3.7	4
All Cities	18	3.5	21
MIDWEST			
Large Cities	12	2.6	22
Medium Cities	9	2.3	18
Small Cities	9	3.6	14
All Cities	11	2.7	19
PACIFIC N. W.			
Large Cities	2	1.5	15
Medium Cities	6	1.5	23
Small Cities	6	3.1	14
All Cities	4	1.8	17
ALL SECTIONS	8%	2.2%	20%

TABLE 22

Oil 9% Cheaper than Gas

	GAS COSTS		RATIO OF NEW INSTALLATIONS	
	More	Less	Oil	Gas
NEW ENGLAND				
Large Cities	23%	..	58%	42%
Medium Cities	26	..	64	36
Small Cities	28	..	86	14
All Cities	25	..	63	37
METRO N. Y.	18	..	32	68
OTH. MID-ATL.				
Large Cities	20	..	23	77
Medium Cities	1	..	32	68
Small Cities	13	..	58	42
All Cities	14	..	30	70
SOUTH ATL.				
Large Cities	11	..	64	36
Small Cities	7	..	47	53
All Cities	10	..	61	39
MIDWEST				
Large Cities	..	12%	29	71
Medium Cities	..	11	36	64
Small Cities	..	15	29	71
All Cities	..	12	31	69
PACIFIC N. W.				
Large Cities	..	2	29	71
Medium Cities	33	..	69	31
Small Cities	11	..	53	43
All Cities	10	..	44	56
1959 ALL SEC.	9	..	38	62

National Fueloil Council oil heat Promotion now in 51 market Areas; spending $1.7 Million

WITH THE ADDITION of four more programs in Reading, Pa., Fort Wayne, Ind., Amsterdam and Buffalo, N. Y., the marketing areas in which oilheating promotion is being conducted under National Fueloil Council sponsorship has grown to a total of 51. Including these last four campaigns there now is a total of $1.7 million being expended to sell oilheating in these areas.

There is an independent promotion program conducted in the Pacific Northwest now in its eighth year, supervised by the Pacific Northwest Regional Advisory Committee. Adding their budget of $411,326 to the NFC total indicates that this year there will be a minimum of $2.1 million expended in these two efforts alone.

The total is referred to as a minimum because there are a number of other areas which either are ready or soon will be in shape to apply for certification by the National Fueloil Council. Total for the NFC programs is based on the initial certification. A second certification will show some variation mostly on the upward side. The refiners match half of the marketers' funds on the first round and contribute the other half six months later, subject to minor revisions to reflect new dealer support.

Latest refiner to support the programs is the Standard Oil Co. of Indiana, joining with these nine others who have cooperated since the programs started: Atlantic Refining, California Oil, Cities Service, Esso Standard, Gulf Oil, Mobil Oil, Phillips Petroleum, Shell Oil and, finally, Sinclair Refining.

Listed below are the 51 areas in which National Fueloil Council programs are conducted, as well as the independent Pacific Northwest program, including the name of the organization which runs the local show and the name of the contact man there.

Participating Markets in Oilheating Promotion under National Fueloil Council

CONNECTICUT

Better Home Heat Council, Inc.
Henry D. Eisler
Michael Hoffman Fuel Co.
156 East Washington Ave.
Bridgeport 1, Conn.
Amount of Budget: $21,840

Better Home Heat Council, Inc., of Greater Danbury
Joseph Buzaid
Mutual Fuel Co.
64 Elm St.
Danbury, Conn.
Amount of Budget: $13,220

Better Home Heat Council, Inc.
Robert Lynch, Jr.
Newgate Oil & Coal Co., Inc.
Box 344
Hartford 1, Conn.
Amount of Budget: $47,440

Better Home Heat Council, Inc. (Stamford)
LeRoy E. Emanuelson, Exec. Secy.
860 Shagbark Drive
Orange, Conn.
Amount of Budget: $31,652

New Haven Fuel Dealers' Association
Francis J. Cronin, Pres.
51 Orange St.
New Haven, Conn.
Amount of Budget: $15,789

FLORIDA

Better Home Heat Council of Florida, Inc.
Reggie Moffat
L. A. Johnson Fuel Oil Co.
P. O. Box 1947
Orlando, Fla.
Amount of Budget: $132,400

INDIANA

Oil Heat Institute of Northeastern Indiana*
M. J. Dettmer, Pres.
316 Central Bldg.
Fort Wayne, Ind.
Amount of Budget: $4,230

Oil Heat Institute of Indianapolis, Inc.
F. W. Harper, Exec. Secy.
5231 Winthrop Ave.
Indianapolis 20, Ind.
Amount of Budget: $23,741

Oil Heat Association of Gary, Ind.
Dean Call, Secy.
504 Broadway
Gary, Ind.
Amount of Budget: $14,984

Michiana Oil Heat Institute
R. Wade Curtis, Secy.
2803 South Michigan St.
South Bend, Ind.
Amount of Budget: $19,412

MARYLAND

Oil Heat Association of Maryland, Inc.
T. E. Carson, Secy.
213 East 25th St.
Baltimore 8, Md.
Amount of Budget: $78,612

MASSACHUSETTS

Better Home Heat Council, Inc.
R. E. Cullen, Managing Dir.
43 Leon St.
Boston, Mass.
Amount of Budget: $264,328

Bristol-Norfolk Oil Dealers Association (Attleboro)
Joseph Dwyer, Secy.
52 Eddy St.
Attleboro, Mass.
Amount of Budget: $5,000

Franklin Oil Heat Council
M. F. Rice
Box 309
Greenfield, Mass.
Amount of Budget: $6,381

MASSACHUSETTS *(Cont.)*

Berkshire Oil Heat Council (Pittsfield)
W. Bruce Knapp
Knapp Oil Co.
53 South St.
Pittsfield, Mass.
Amount of Budget: $15,296

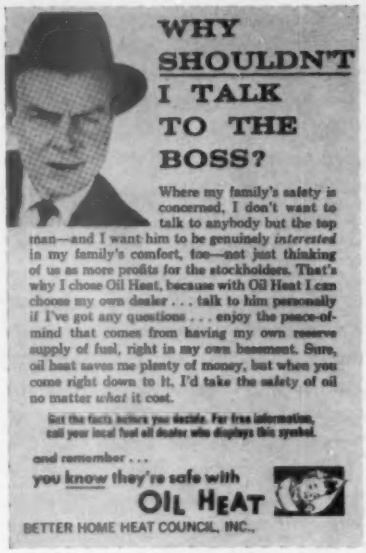
Oil Heat Council of Western Mass.
Keith F. Fletcher, Exec. Secy.
P. O. Box 1315
Springfield, Mass.
Amount of Budget: $12,310

MICHIGAN

Oil Heat Information Council, Inc.
Frank Fehsenfeld
Crystal Flash Petroleum Co.
1754 Alpine, N.W.
Grand Rapids, Mich.
Amount of Budget: $9,395

Macomb Fuel Oil Dealers Association
Edward D. Brown
Shores Oil Co.
19933 Nine Mile Rd.
St. Clair Shores, Mich.
Amount of Budget: $13,414

Oakland Oil Heat Council (Pontiac)
James R. Stelt, Secy.
42½ East Pike St.
Pontiac, Mich.
Amount of Budget: $20,100


WHY SHOULDN'T I TALK TO THE BOSS?
Where my family's safety is concerned, I don't want to talk to anybody but the top man—and I want him to be genuinely interested in my family's comfort, too—not just thinking of us as more profits for the stockholders. That's why I chose Oil Heat, because with Oil Heat I can choose my own dealer . . . talk to him personally if I've got any questions . . . enjoy the peace-of-mind that comes from having my own reserve supply of fuel, right in my own basement. Sure, oil heat saves me plenty of money, but when you come right down to it, I'd take the safety of oil no matter what it cost.
Get the facts before you decide. For free information, call your local fuel oil dealer who displays this symbol.
and remember . . .
you know they're safe with
OIL HEAT
BETTER HOME HEAT COUNCIL, INC.

MISSOURI

Oil Heat Institute of St. Louis
George Koertel, Secy.
3917 Federer Place
St. Louis 16, Mo.
Amount of Budget: $28,662

NEW JERSEY

Oil Heat Council of New Jersey (State)
Leslie R. Freeman, Administrator
1060 Broad St.
Newark 2, N. J.
Amount of Budget: $65,804

NEW YORK

Capital District Fuel Association, Inc.
Franklin Steinhardt
J. M. Steinhardt, Inc.
344 Central Ave.
Albany, N. Y.
Amount of Budget: $6,919

Amsterdam Oil Dealers Association*
Herbert Wilde
Trion Oil Co.
35 W. Main St.
Amsterdam, N. Y.
Amount of Budget: $3,800

Oil Heat Institute of Buffalo*
Reginald B. Newman
R. B. Newman Fuel Corp.
330 East Niagara St.
Tonawanda, N. Y.
Amount of Budget: $17,774

Oil Heat Institute of Long Island, Inc.
Robert Barr, Exec. Secy.
65 Greenwich St.
Hempstead, N. Y.
Amount of Budget: $93,742

Eastern Orange County Fuel Oil Dealers, Inc.
A. Rhoades, Exec. Secy.
9 Hilltop Drive
Newburgh, N. Y.
Amount of Budget: $5,300

*Have filed certifications to be acted upon at the September 11 meeting of the Board, National Fueloil Council.

NEW YORK *(Cont.)*

Better Heat with Oil Council, Inc.
Joseph Loveland, Exec. Dir.
1220 Broadway
New York 1, N. Y.
Amount of Budget: $115,144

Hudson Valley Fuel Oil Distributors Association
Amos R. Newcombe
Amos R. Newcombe Corp.
Manor Lane
Kingston, N. Y.
Amount of Budget: $8,158

Niagara Falls Oil Heat Association
Bernard Levy, Secy.
1415-1417 Main St.
Niagara Falls, N. Y.
Amount of Budget: $16,000

Dutchess County Fuel Oil Dealers Association
D. P. Love, Secy.
Love Oil Co.
16 Seaman Rd.
Poughkeepsie, N. Y.
Amount of Budget: $9,737

Oil Heat Institute of Rochester, Inc.
Frank Cady, Managing Dir.
P. O. Box 903
Rochester, N. Y.
Amount of Budget: $34,399

Modern Oil Heat Institute of Northern N. Y. (Watertown)
Gene Pfaff
Briggs Oil Co.
Great Bend, N. Y.
Amount of Budget: $9,150

Oil Heat Institute of Westchester
James E. Grady, Exec. Secy.
6 Palmer Ave.
Scarsdale, N. Y.
Amount of Budget: $85,664

NORTH CAROLINA

East Carolina Oil Heat Council
H. S. Castleberry
Gulf Oil Corp.
Smithfield, N. C.
Amount of Budget: $36,856

North Carolina Oil Heat Council (Central)
F. Stuart Kennedy
Rex Oil Co.
Thomasville, N. C.
Amount of Budget: $74,336

PENNSYLVANIA

Tri-County Fuel Dealers, Inc.
Floyd Brown
347 Bridge St.
Phoenixville, Pa.
Amount of Budget: $4,110

Chester County Fuel Oil Dealers Association
W. P. Canby, Jr., Secy.-Treas.
Drawer J
Downington, Pa.
Amount of Budget: $5,070

Delaware Valley Fuel Oil Dealers Association
A. J. Kissileff, Exec. Secy.
202 Plaza Bldg.
Glenside, Pa.
Amount of Budget: $22,396

PENNSYLVANIA *(Cont.)*

Oil Heat Association of Central Pa., Inc.
H. J. Selig, Secy.
1501 Herr St.
Harrisburg, Pa.
Amount of Budget: $12,800

Lancaster Conference, OHA of Central Pa.
Charles F. Landis, Secy.
Box 1197
Lancaster, Pa.
Amount of Budget: $4,870

Oil Heat Council
E. E. Esterline, Exec. Secy.
Newton Bldg.
53d and Baltimore Ave.
Philadelphia 43, Pa.
Amount of Budget: $85,182

North Penn Fueloil Dealers Association (Ambler)
A. J. Kissileff, Exec. Secy.
202 Plaza
Glenside, Pa.
Amount of Budget: $2,950

Reading Conference, OHA of Central Pa.*
D. J. Witman
D. J. Witman Co.
Pottsville Pike
R. D. 2
Reading, Pa.
Amount of Budget: $5,618

RHODE ISLAND

Home Heating Council of R. I. (Providence)
Arthur J. DeBlois, Jr.
DeBlois Oil Co.
Colfax St.
Pawtucket, R. I.
Amount of Budget: $65,890

SOUTH CAROLINA

Greenville County Fuel Oil Dealers Association
J. E. Williams
J. E. Williams Oil Co.
P. O. Box 193
Greenville, S. C.
Amount of Budget: $11,831

Spartanburg Fuel Oil Dealers Association, Inc.
W. G. Willard
Willard Oil Co., Inc.
Spartanburg, N. C.
Amount of Budget: $6,312

VIRGINIA

Fredericksburg Fuel Oil Dealers Association
Douglas E. Quarles, Jr., Pres.
1215 Snowden St.
Fredericksburg, Va.
Amount of Budget: $3,000

Tidewater Oil Heat Association, Inc.
Corbin White
C. B. White & Bro.
Brambleton Ave. at Maltby
Norfolk, Va.
Amount of Budget: $17,597

Richmond Oil Heat Association
E. D. Catterton, Secy.
515 West Grace St.
Richmond, Va.
Amount of Budget: $13,022

(*Please turn to page* 166)

Give 'Em the Air

Oilburner Performance improves when an outside Duct guarantees positive air Supply

It seems likely that just about every oilburner dealer and serviceman has encountered the troublesome job that smokes and soots at times and at other time performs perfectly. Any number of solutions have been tried, any number of theories have been advanced.

When Dalton Oil Co., Gary, Ind., found such service calls troublesome, they undertook an intense and thorough study and came up with a logical and what has turned out to be an effective way to cure the problem. It involved the attachment of a fresh air duct to provide a positive supply of combustion air to the burner from outside the house.

Bill Allman, Dalton vice-president, outlines the problem in the accompanying article, tells why the fresh air duct was picked and follows up with a report of the results.

DON'T EVER UNDERESTIMATE—the need for fresh air for oilburners.

Vaporize or atomize oil, introduce air containing a known quantity of oxygen, increase the temperature to the ignition point and you have oil burning. There are other factors, of course, which contribute to controlled combustion—proportionate and proper mixing of air and oil, correct size and design of combustion chamber volumes and surfaces, proper draft, etc., etc.—but both theory and practice have proved beyond doubt that oxygen is an absolute necessity whenever fueloil is burned.

But, those are generalities. To be more specific, William E. Allman, vice-president, Dalton Oil Co., Gary, Ind., has learned from experience that the way a house is built can make a difference in the operation of the oilburner.

For instance, as a result of observations made and service records studied Dalton now presupposes that every house needs a fresh air intake to provide a positive supply of air to the oilburner. This has been found to be particularly true in houses where clothes dryers are in use. The driers exhaust some 200 cfm from the basement and they battle the oilburner for air. If the drier and the oilburning unit are in a utility room, the problem is even more acute. The same thing is true, to a lesser degree, with kitchen and bathroom exhaust fans.

Allman explained that Dalton's oilburner service department is run by Don Blake, service manager. Blake has had 20 years experience in oilburner service work and is highly proficient.

In the course of servicing more than 5,000 accounts each year, he saw that certain burners were sooting chronically. The oilburner would be put in first class operating order by the serviceman each time there was a complaint, but often within a few months there would be another call and the unit would be badly sooted.

Repeating the process of cleaning and adjusting the burner, setting it with instruments for zero smoke would correct the complaint. Frequently, however, the customer would call in a third time within a short period with the same trouble. These let it be said were the extreme cases.

The matter became mildly serious, Allman said, from a customer standpoint since they naturally dislike frequent service calls, particularly if they have to pay for them. From the company standpoint, repeated service calls make it expensive to maintain certain customers on service contract.

So, service charts were studied, revealing a curious fact. More of this type of trouble occurred in relatively new homes than in older homes and there were more complaints of smoky fires observed during the night than during daylight hours.

From these facts Service Manager Blake evolved a theory on how to solve the problem. It appeared certain that at some time during the operating period, these otherwise well adjusted oilburners must have been starved for air. And it didn't take long to verify the suspicion that the newer homes were tighter, more closely sealed than the older ones. For one thing, the newer homes generally had insulation, weatherstripping and such to seal them more tightly against air infiltration.

Then came some rule-of-thumb calculating. Suppose it requires approximately 1,800 cubic feet of air for the proper burning of one gallon of fueloil —this would be the contents of a room slightly larger than 16 ft. square with a 7 ft. ceiling. Still theorizing that the basement in an average house is about this size and the oilburner is rated at 1 gph, 30 cu. ft. of air per minute are required to furnish that little burner with 1,800 cu. ft. of air in an hour.

There's the problem and here's how Dalton Oil solved it. They designed a fresh air duct of sufficient size to supply free and proper amounts of air to an oilburner in a positive manner. In every case possible the fresh air duct was attached positively to the

burner and sealed. A Wisconsin hood was used to surround the air grate.

Where this was not possible, the duct was brought down within 2" of the floor or 4" below the air intake on the burner.

By now Dalton Oil has sold enough fresh air duct installations—at a cost of $15 to $35 each—to know that they have solved some very specific service problems. Allman concedes that it's difficult to convince anyone of the need for a separate, fresh air supply for the oilburner, but at the same time he can cite any number of instances to prove his point.

For example, on one installation four months old, Blake suggested to the homeowner that he look at the oilburner fire at dinner time, again before going to bed and a third time in the morning. He did and telephoned the next morning with an order to install a fresh air duct.

A case History

Here's what he said had happened. At dinner time the burner flame was clean; when he looked at the fire again before going to bed he noticed smoky tips; in the morning he saw a real smoky fire. He rushed outside to see if smoke was coming out the chimney and when he came back to the basement the fire had cleared up perfectly. He realized then that by opening the basement door he temporarily relieved a condition of deficient air supply.

This was a prefab house, but it bears out the previous assumption that most houses today are constructed more tightly.

In one sub-division in Gary, Allman went on, Dalton Oil installed fresh air ducts in a number of houses. They were all alike, all were about five years old and service records indicated clearly that here was a trouble zone of soot and smoke complaints.

The ducts were installed during the summer of 1958. In May this year, a serviceman doing annual clean-ups worked every day for three weeks without having to vacuum clean a single job. An adequate, positive supply of fresh air had eliminated soot build-up.

"When fresh air ducts first were seen as an apparent answer," Allman pointed out, "we installed them in a few homes. Then we put in more and more until the results of more than three years effort now prove to us conclusively that performance of the oilburner has been improved in every case where the fresh air duct was applied.

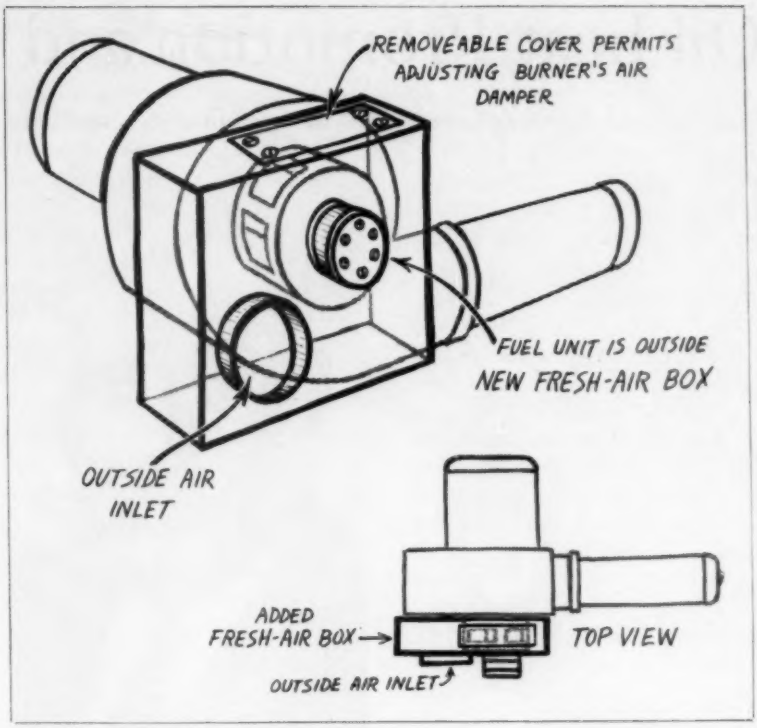

REMOVEABLE COVER PERMITS ADJUSTING BURNER'S AIR DAMPER
FUEL UNIT IS OUTSIDE NEW FRESH-AIR BOX
OUTSIDE AIR INLET
ADDED FRESH-AIR BOX
TOP VIEW
OUTSIDE AIR INLET

Diagram of fresh air intake used by Dalton Oil Co. to correct service problems caused by insufficient air supply to oilburners. The duct is run out the nearest wall, is equipped with a louvered, screened opening to the outside. These drawings were copied from a design prepared by Jackson & Church, Saginaw, Mich.

Not a Cure-all

"We don't regard the fresh air duct as a cure-all, nor do we sell it that way," Allman continued. "It definitely does reduce sooting, carbonized nozzles, baked electrodes and many other complaints caused by an insufficient supply of air for efficient combustion. But, the burner still must be set properly and the components of the burner must be in good working order. The draft must be adequate and sufficient; the fresh air duct can assist the draft, but it cannot provide it. Finally, smoke tests must be taken on every installation when the fire is set."

Allman doesn't suppose that Dalton Oil is the first company to use a positive fresh air supply to correct some burner complaints. But he's satisfied at the same time that the number of installations they've made and the length of time it's been possible to observe results have proven to them than the benefits are real.

He points out that designers or architects practically never install a heating plant in a commercial building without providing a source of fresh air for the oilburner. The reason here is obvious. But, the same difficulties are present in a domestic heating job and are more difficult to pin down because the situation can be an "Off-again-on-again" one.

Most installers, Allman said, take the attitude that usually there is a supply of fresh air available for combustion; Dalton has adopted the attitude that every house should have a fresh air duct to provide the positive supply an oilburner needs. As the weather gets cold, he continues, the tendency is to seal the house up tighter, restricting air supply at the very time the oilburner needs it most.

Oil heat Promotion and your Future

Projects and Attitudes contribute to continued Growth and Profit

by C. M. Blickensderfer*

IT IS MOST ENCOURAGING that throughout the heavy volume heating oil markets of the nation, increasing interest in and support for heating oil association activities are being manifested.

It is in recognition of the need for this basic Industry cooperative movement that the Fuel Oil Committee of the American Petroleum Institute is developing as rapidly as possible plans for a newly-constructed national organization in which equipment and accessory manufacturers, heating oil dealers, terminal operators and refiners may join together in the broad field of "Research" "Promotion" and "Communication" in order to strengthen oil heat in its long range competition with other energies—electricity, and natural gas.

While this splendid heating oil market of Tidewater, Va., comprising some 68,000 installations representing some 70 million gallons, divided about equally between central and non-central heating plants, has been somewhat insulated from gas by (1) cost advantage favoring oil and (2) restricted distribution facilities, you are and will continue to experience increased competition from this source, particularly in new-home tracts.

As we so well know, gas is well-implemented and supported, first, by close-knit, concerted utility marketing organizations, second, by substantial promotional and research funds, third, by devious methods and instruments which reduce initial equipment costs, and fourth and most important, by the various forms of governmental regulations which bear heavily upon the price of gas fuel at both the production and consumption level.

The Chase Manhattan Bank in its recent world petroleum industry study finds that oil, on the basis of over-all form value, is a superior fuel. It has flexible burning characteristics. It is conveniently and inexpensively stored above or below ground, from production to consumption. Its transportation costs through tanker, pipeline, barge, rail and truck are lower than for any other form of energy.

While gas too has excellent burning characteristics, its cost of transportation and distribution is much higher and it continues to rise as new and expanded facilities are required and financed.

Basically, the ability of gas to compete with oil on any level goes back to the pricing at the well-head. On a Btu basis the average price of gas at the well-head is about one-fifth the price of crude, although it comes from the same well or under comparable research and production costs. It is interesting to note in this connection that over the past ten years there has been a narrowing in this imbalance. The cost of gas at the well-head has increased approximately 365% in comparison with oil at 114%. Further, the cost of transporting gas is some four times greater than the cost of transporting oil.

Gas is, of course, much too valuable an energy to be wasted or ignored. Its continued production and utilization as an energy is sound and will continue. Nevertheless, whether produced incidental to oil or separately, gas eventually must share in the attending costs, to generate adequate research and production. The inequitable well-head cost-price relationship of gas and oil is pointed out in the Chase report, which states in effect that the average well-head value per barrel of gas and oil combined has declined 13% during the post-war period because of the more than two-fold growth in low-value gas components, compared to high-value oil components. From purely economic considerations it seems only reasonable to assume that this inequitable pricing of comparable quality energies will correct itself as soon as the regulated status of gas permits.

This vexing economic problem facing the petroleum industry does not stop here because our distillates now represent a seasonal volume which contributes enormously to a balanced and profitable over-all operation at all levels.

While I am sure that it seems to many of us that the oil industry does not appreciate or may even ignore the seriousness of our problem, this is not true today,

First of all, the price of gas has been rising gradually, both at well-head and at distribution levels. Notwithstanding the underlying governmental regulations, the economics of the situation are being felt.

Second, I question whether there are now any major companies operating in oilheating areas whose top management, and particularly their marketing vice-presidents, are not seriously interested in and deeply concerned with their distillate distribution and its effect on profits. In API circles, where we on your Fuel Oil Committee

*Manager, Fueloil Sales, Sinclair Refining Co., Condensation of a talk at the Oil Heat Dealers Conference, held in Norfolk, Va. and sponsored by Tidewater Oil Heat Association and the Distributive Education Services of Hampton Roads.

are exposed to the thinking and philosophy of marketing executives, we are convinced that oil heat of the future will be promoted and sold as vigorously as other products, both through company and industry channels.

Two major Projects

In support of this encouraging industry position, there are two major projects of which the API Fuel Oil Committee is progressing rapidly:

THE FIRST PROJECT—The Research Plan—An industry coordinator has been appointed to explore existing and potential sources for the improvement of oilheating equipment, with specific emphasis on a completely new, low-cost conversion oilburner to meet gas competition. Of course, this activity includes the development of new applications for the use of fueloil, including airconditioning.

The Research Plan is being financed by API funds for the first year.

The actual work is being done under the auspices of the Battelle Memorial Institute. D. W. Locklin, whom many of you may know from his association with our industry, has been selected by the Research Committee to head the work.

THE SECOND PROJECT in support of industry's strengthened attitude and position toward its distillates is a study of ways and means to combine into one organization all of the activities of the National Fuel Oil Council, Oil Heat Institute, API Research Program and any others that exist, to the end that our industry through one organization may front for oil heat. The economics, stature, and eventually industry acceptance of such an organization in promoting a preference for oil heat, advancing research, and expanding communications could be tremendously valuable. It should encourage wider support at all levels—the refiner, the terminal, and most importantly, at the local reseller level.

While your Industry is advancing these two major projects, a very important step is being expanded.

The National Fueloil Council, Inc., successor to Oilheating Market Reports, is now a going concern. Its purpose is—

First, to organize and financially assist cooperative advertising promotion at the local level; Second, to disseminate to the public useful information about oilheating in a manner which will improve the stature of the industry and increase public acceptance.

Its promotion objective is to encourage, generate and support on a 50-50 basis the efforts of local associations. As you know from press releases, the potential funds for this program are about $3,000,000, half coming from major suppliers and half from local efforts.

I visualize this much-needed local promotion as only a beginning. As the work of this Council under the present group of supporters goes forward, we should greatly expand our supporting refiner membership and perhaps expand local promotion into national fields. All suppliers at the refiner level should join the Council and through it contribute to the welfare of their dealers and distributors.

Expanding Economy ahead

In brief summation of my remarks, I think we can say:

First—the cost-price relationship of crude oil and gas is so far out of balance that a change favorable to heating oil seems inevitable.

Second—The industry climate in which oil heat must be promoted has never been more sensitive or favorable. The marketing segment of your refiner suppliers has at last recognized your needs with substantial funds for promotion and research and a sound organization to equitably handle the support—73% of your refiner suppliers in the Eastern States now support the National Fueloil Council.

Third—Your API Fuel Oil Committee is fast becoming a virile and effective industry arm in the American Petroleum Institute's Division of Marketing. It is here that much can be done to germinate and crystallize industry support for important programs and projects.

Fourth—The local marketing segments of our industry must accept the responsibility for encouraging and supporting a united front at the local level to complement the national effort. This concerted effort must include:

1. Good business practices in administration, in the selection of suitable advertising and promotion mediums and in the use of funds.
2. A progressive widening of the local participation base. All local resellers should be encouraged and urged to join, in order to raise as large a fund as possible for matching by the central office. Nationally, one of our prime problems is to obtain representative membership and support from all resellers in the market.
3. Our customer services must be continuously studied, looking to improvements at lower costs. Service is an area in which gas claims important advantages. We should strive to reduce or eliminate any real or fancied margin favoring gas. The so-called "comfort" package service embracing mechanical oilburner service, automatic delivery, budget plans and a trouble-free product is imperative in our long-range competition with gas. Eventually, customers must and will look to the heating oil supplier for all the services which make for his heating comfort.
4. Our replacement market must be watched. With many of our present oilburners reaching replacement age, we must be watchful from every avenue open to us, particularly in our service departments.
5. Research must be firmly established and continuously supported with proper direction and funds in order that (a) oil heat may be fully competitive as to equipment and (b) new applications, including airconditioning, may be made available to supplement space heating.

In conclusion, I am sure that the majority of us will see the time when oil, gas, electricity and even coal will share on a proper cost-price basis the energy requirements of the expanding economy which lies ahead of us, and that you can look forward to continuing growth and profits from fueloil over the next ten years. Strong local organizational support for oil heat promotion will go far to assure this end.

Getting the most from Forced-air

Harry Giffords, fueloil Retailer, demands extraordinary Performance from Furnaces

by John W. Schulz

MOST OILHEATING enthusiasts who emphasize modern, forced-air heating are content to have an oilfired furnace work at doing one thing—heating a house just about perfectly.

Only a rare perfectionist demands that such a furnace do much more—take on additional work, for example, of providing hot water on tap the year 'round.

Most forced-air enthusiasts in the oil heat field are content to use the usual and ordinary methods of zoning the heat, in a home where the need arises to provide a separate zone of heating for a rumpus room.

Only a rare perfectionist demands almost instant heating up of a cold rumpus room— wants its temperature to go from 50°F. to 75°F. in a matter of minutes—after a sudden decision to fill the rumpus room with a dozen or two dozen guests. Only a rare perfectionist would go to work to plan, then actually install, such an instant heat-up arrangement.

Fortunately, such a rare perfectionist, who demands these kinds of extraordinary performances from oilfired furnaces, occasionally is encountered today. Recently, I had the great pleasure of spending a day with such a perfectionist; he is Harry Giffords, vice president of Giffords Oil Company, Franklin Square, N. Y.

A session with Harry Giffords, at his desk in the headquarters of the outstandingly modern and successful Giffords Oil Company, brings out the fact that he is a man of many, widely different interests, and that he works at all of these with peculiar intensiveness and great vigor.

Coupled to his family life are his sparetime activities and hobbies including modern art to which he gives of himself and his own efforts by making "immobiles" with his own hands, and designing and making sizable marble representations worthy of professional interest.

He has the fulltime, work-day responsibilities of his oilheating and fuel-oil business. But in addition he is highly active with association work and related work, which he does gladly with the aim of assisting and bettering the fueloil and oilheating industry.

On top of all this, he has had a hand for years in arranging the mechanical equipment used by his fueloil delivery trucks to make certain their effectiveness and efficiencies are at a peak. He knows much about accepted ideas that speed up oil deliveries, and he has contributed an array of his own ideas.

To top that off, Giffords has always taken an intensive interest, and still does today, in oilheating as it actually comes out in the homes of oil-burner owners.

As the start of this article suggested, Harry Giffords is not content to have the typical, modern, oilfired furnace in his home work at only providing perfect heat for the house—he makes it work, in addition, at providing hot water on tap year 'round.

Also as was suggested, he was not content only to learn about, and put to work, the usual and conventional methods of zoning a warm-air system, when the large rumpus room in his basement at home needed a heating zone for itself.

Instead, he developed and installed his own type of heat zoning arrangement, which gives the almost instant heating up of cold rooms of a zone, which has been mentioned.

Studying the heating performance for that basement zone that Giffords demands, and obtains, reminded me of a New England farmer.

A city friend, inspecting the farmer's place for the first time, noticed a hole in the barn wall, at ground level, and asked what it was for. It was for a cat, the farmer explained. Returning a few months later, the visitor saw seven side-by-side holes in the barn wall, and asked what they were.

"Cat had six kittens," the farmer told his friend abruptly.

Puzzled, the friend asked, " Can't

Hot-water tank arrangement in Harry Giffords' home proves to its owner the tank is amply hot to give plenty of hot water. One advantage of a tank over the usual tankless heater in a home, Giffords emphasizes, is that the temperature of the hot water at a faucet remains the same, even though two or three other hot-water faucets are opened wide simultaneously. Another advantage: In a pretentious home that needs this, any size hot-water tank can be installed—tanks of 100 or 120-gallon size, and even larger, can be installed to provide out-of-this-world, absolutely perfect, hot water.

Close-up of zone motor-damper unit designed by Giffords and used to heat his basement, rumpus room. Diag. 3 indicates schematically what's in this unit, and how it is installed.

the cat and six kittens all use the one hole in the barn wall?"

The farmer snapped, "When I yell 'scat', I mean 'scat'."

When Harry Giffords wants heat in that basement rumpus room, he similarly wants heat — without the furnace fooling around for 20 or 30 minutes to boost the room temperature from 50°F. to 75°F. He wants his furnace to lean on the heat load of that room instantly, with all the power it's got, or anyhow with as much of this power as is needed for practically instant heat-up of the particular zone.

Giffords has accomplished this using ideas he developed himself, which the accompanying photographs and drawings show.

Before Giffords' forced-air system had the zoned-heat feature added to it, it provided year-round hot water through use of the ideas and equipment shown in accompanying diagrams and photographs.

In Diag. 1, a conventional, modern, forced-air oil furnace appears with an assembly placed on top of it which includes a water heating coil made up of a suitable amount of finned copper tubing. This assembly, and the automatic outlet damper in the drawing, are some of the parts of a system which has been sold under the trade name of Aqua-Air.

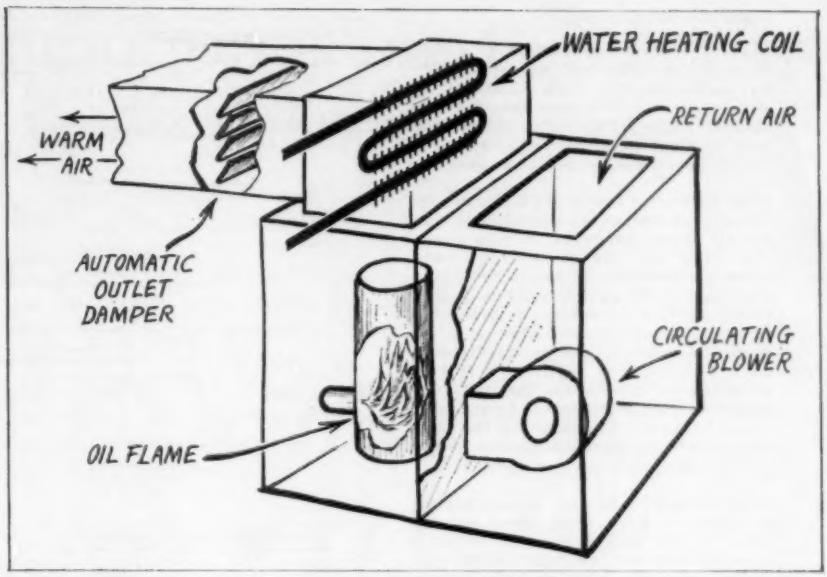
This Aqua-Air system, which could be added to any forced-air, oilfired furnace to provide year-round hot water, was manufactured and sold to the heating trade by Harry Giffords. About 500 installations were made, Giffords says, but he no longer manufactures it. His interests became too involved and diversified to include the manufacture of such Aqua-Air equipment—after all, Giffords is primarily in the fueloil business.

His academic interest in such equipment continues high, however, and he wishes it well for the future . . . hopes it will be of overall benefit to the oilheating and fueloil industry. He points out that his Aqua-Air patents expire in 1960, and that then his ideas may be used freely by any interested manufacturer.

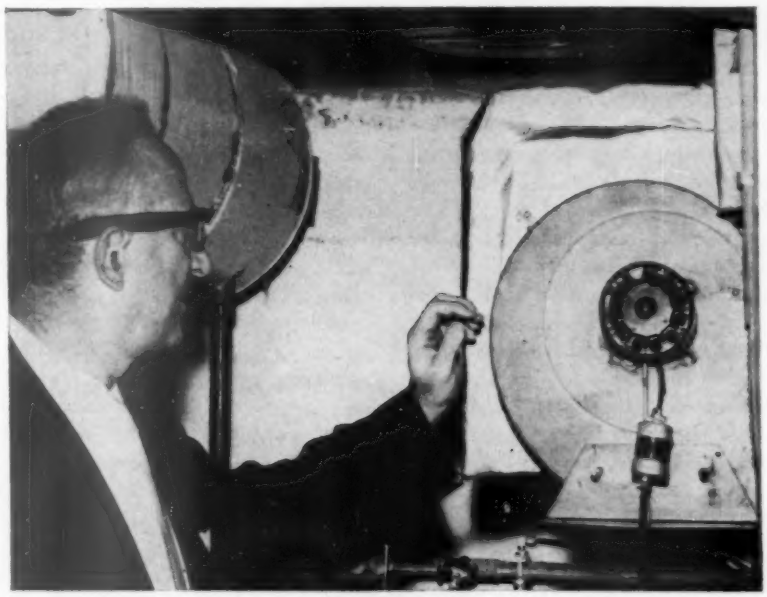
Photograph 1 shows the hot-water storage tank, in Giffords' home, which is heated by his furnace. (Facing page.)

Photograph 2 shows an auxiliary circulating blower, not shown in Diag. 1 to keep this drawing simple. (Left.)

See Diag. 1. When heat is needed in the house, a room thermostat starts



Diag. 1—Summer-winter hot water is provided in Giffords' home by a hot-water storage tank, which is given heat by a water heating coil located in a well-insulated chamber that's above the furnace's warm-air outlet connection. This schematic drawing shows the location of the water heating coil, but it does not show the auxiliary blower (shown in the photograph, and described in detail in the text of the article) used to step up greatly the output of the coil by rushing hot air through its fins. Also not shown in this drawing, to keep it simple, are the conventional air filters of the forced-air furnace, located above its circulating blower.



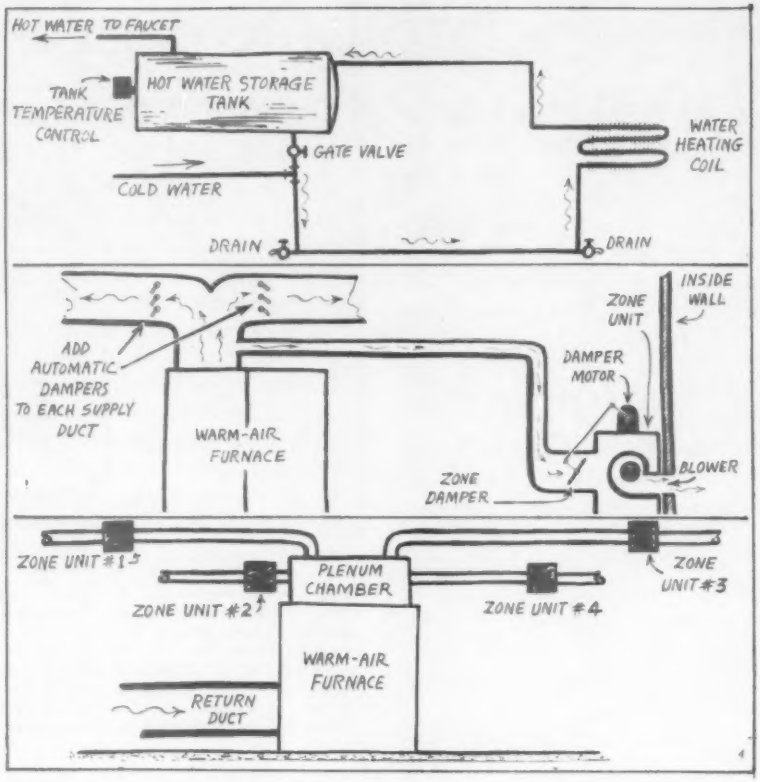
Close-up of Harry Giffords and the auxiliary blower used in his home to rush hot air through the fins of the water heating coil shown in Diags. 1 and 2. The chamber in which the water heating coil is located is behind the auxiliary blower, in this photograph. This entire chamber is covered by highly effective insulation. Because of this and other design factors, Harry Giffords says, the entire water-heating set-up is so efficient that oilheated hot water cannot be provided at higher efficiency and lower cost by any other type of water heating equipment.

From top to bottom:

Diag. 2—Path of circulation of water, through the water heating coil and the hot-water storage tank, is shown by curved arrows. The tank should be insulated highly effectively, and for the sake of rapid circulation and rapid water heating, should be as high as possible.

Diag. 3—Here's how Harry Giffords provided zoned heat of the instant-heat type for his large, basement, rumpus room. The "zone unit" he devised has many other applications, he points out. (It is described in detail in the article.) One of its greatest advantages is flexibility. It can be of any needed cfm capacity; it can be located close to the furnace, close to the supply registers it serves, or anywhere in-between. For the spectacular heating performance he designed for in his home, he connected the new, zone unit to his furnace's plenum chamber by a seven-inch smokepipe.

Diag. 4—New forced-air system can be arranged to have four zones, or any other desired number of zones, through use of this pattern. Certain precautions against "air leaks" and "gas leaks" must be observed, as the article spells out.



the oilburner in the usual manner. When the furnace bonnet control becomes warm, in the usual manner this control starts the furnace's conventional circulating blower. Air pressure from the blower opens the automatic outlet damper in Diag. 1. However, important, this damper remains tight-closed when the circulating blower in Diag. 1 is not running.

When a temperature control on the hot-water storage tank (see photograph 1 and Diag. 2) closes its circuit because this tank needs heat from the furnace, the oilburner starts. The furnace's conventional circulating blower, shown in Diag. 1, will not run, because heat is not needed in the rooms. The automatic outlet damper in Diag. 1 will remain tight-closed. However, the auxiliary blower in photograph 2 will run—for the purpose of rushing hot air, heated by the furnace, through the fins of the water heating coil (in Diags. 1 and 2). The operation of the auxiliary blower multiplies the effectiveness of the water heating coil by many times—makes this coil give the hot-water tank five to ten times as much heat as it would without the help of the auxiliary blower.

Because of the help of the auxiliary blower, installed only to rush hot air through the fins of the coil, the water heating coil transfers as much heat as would be transferred by a coil five to ten times as large, but not helped by the auxiliary blower.

Hot-water storage tanks of Aqua-Air systems usually were 40-gallon size for typical one-family homes, and 66-gallon size for two-family homes.

To add the instant-heat feature for the basement, rumpus room to his already installed furnace (which already had the Aqua-Air equipment working with it to provide summer-winter hot water), Harry Giffords installed the zone unit, which he designed, and which is shown in photograph 3 and in the right-hand side of Diag. 3.

This zone unit includes, as the illustrations make clear, a separate circulating blower to serve the zone, a damper motor, and a damper that's closed when the zone needs no heat. Also in the unit is a limit switch to turn on the oilburner when the damper motor opens the damper.

The new zone, served by the zone unit in Diag. 1, has its own room thermostat, of course. When the circuit of this thermostat closes because heat is needed, the damper motor opens the zone damper. A limit switch in the damper motor closes the circuit of the zone blower. A usual bonnet control arrangement can be used to prevent operation of the blower in the zone unit when the furnace plenum is not hot and cannot provide warm air for the zone unit.

As has been explained, the heating system in Giffords' home already was providing hot water in the Aqua-Air fashion, when he added to this heating system the new zone motor-damper unit for his basement, rumpus room. His heating system already was equipped with the automatic outlet damper in Diag. 1.

To apply the Giffords' zone-control idea to any forced-air heating system of the usual kind (not providing summer-winter hot water), an automatic damper would have to be added to each supply duct, as the left-hand note in Diag. 3 indicates.

Diag. 4 suggests how four of Giffords' zone motor-damper units can be used in a new forced-air system to provide four-zone heating. As each motor-damper unit contains its own

(*Please turn to page* 162)

Gas Heat Promotion is big Figures

Examination of Budgets in two dozen Markets discloses heavy advertising Outlays

ONE OF THE DIRECTORS of the National Fueloil Council asked the secretary if something could be learned of the amount being spent by local gas utilities to promote their fuel. He particularly had in mind the markets where the NFC advertising campaigns are now in progress.

A questionnaire to the officials of the local oilheating groups brought to light some quite significant figures. These could not always be had in the forms asked for. Again, it was not too often possible to get a separation between what the gas utility spends to promote its "kitchen load" and its heating volume. Some of the groups could not get any information.

The data that came in were quite interesting for what figures they brought and also for general impressions; the basis of the figures was not sufficiently uniform to handle in tabular fashion, so we'll simply outline what we did get from two dozen spots.

Boston, Mass. Covering a 30-mile radius from the center of the city, plus Worcester County, it is estimated that the utility spent for advertising and sales promotion in 1958 about $500,000 and will spend in 1959 approximately $600,000. Of the 1958 sum, approximately half was spent to promote heating; this year it's 65%.

Springfield, Mass. The Springfield Gas Light Co. had gross revenues in 1958 of $8.8 million. An estimate of its promotional budget for last year is $200,000, of which half was for heating. This year they are expected to spend $175,000, and of this $85,000 for heating. It's well to observe that promotional budgets include quite a lot of things other than advertising, such as public relations, demonstrations at women's clubs, field men calling on heating dealers and anything directly aimed at getting new business.

Providence, R. I. Here the figures cover only actual advertising media at space rates, no general sales promotion expense nor even production costs on the ads. The estimated total spent in 1958 was $333,000. This was divided: newspapers $274,600, outdoor posters and bus advertising $16,500, radio $41,900. The agency estimates that fully 80% of this carried the emphasis on heating. For 1959 the estimated outlay, again strictly for media, is $325,000.

Hartford, Conn. The Hartford Gas Company covers an area approximately 14 miles square, but a modest business is also done in the area by Connecticut Light and Power Co. and New Britain Gas Co. The figures quoted are for Hartford Gas only and cover sales promotion costs for three years as follows: $215,881 was spent in 1956; in 1957 it was $288,201 and for 1958 the estimate was $270,000. There is no available projection for 1959. In the three years as stated the ratio for house heating out of the total effort was 70%, 80% and 80%, respectively.

Danbury, Conn. In a 12-mile radius, the gas utility spent for advertising only in 1958 approximately $11,000, and $12,000 is estimated for 1959. Of these amounts, two-thirds was devoted to heating.

Bridgeport, Conn. We have two separate reports covering the general area of which Bridgeport is the main metropolis. The first one covers Bridgeport, Fairfield, Stamford, Trumbull and Milford. It estimates gas company sales promotion in 1958 at $150,000 and doubles this for 1959 or $300,000. In the first year 50% was for heating; this year apparently 60% will push gas heat. The second report covers "from Westport west to the New York border and north to Danbury." It estimates the 1958 sales promotion outlay at $250,000 and this year $300,000. The share spent for house heating is placed at approximately 80% in each year. The two reports agree on the total for this year but probably the lower percentage of the two would be objective for the share devoted to heating.

This is always a matter of impression anyway, because whatever glorifies gas as a fuel helps heating. Big gas industry elements, like the American Gas Association, put far more support behind domestic uses of the fuel than heating, largely because of the differences in the selling price of the fuel for the two purposes. Local utilities, in a load building battle, may go far overboard on the heating side.

Metropolitan New York. Here we have several gas utilities, but since they're all interconnected for load balancing purposes we evaluate the market as a whole. Not only that, but any promotion by a single utility is sure to rub off on the prospects of the others.

Consolidated Edison and its subsidiary, Westchester Lighting Co., report for 1958, "Gas sales were up 7.3% over 1957, caused principally by colder weather during the heating season. The residential heating customers, as a group, used 20% more gas. Total gas revenues showed a 9.8% increase, reflecting not only the higher charges for gas which went into effect the first of the year, but also the increased sales."

There is no stated figure on its advertising or sales promotion for the Company as a whole but for Westchester County the actual advertising outlays are estimtaed at $105,000 in 1958 and $138,800 budgeted for 1959. Last year 85% of the fund is said to have been for heating and this year 100%. This includes none of the marginal values from Con Edison's city television, radio or newspaper insertions.

The Company's annual report shows that it sold for residential heating last year 14,121,523,700 cubic feet of gas for which it collected $22,840,087 or about $1.62 per Mcf. This

includes the fuel used for other domestic purposes by the house heating customers. It paid for the natural gas it bought 34.8¢ per Mcf. For the non-heating residential users the volume was 9,801,488,300 cubic feet and the income $33,929,929, or $3.47 per Mcf. Total gas meters on Dec. 31, 1958 were 1,353,448. The company also reports adding its 100,000th home heating user.

The Brooklyn Union Gas Co. reports that it spent for advertising last year $460,000, with 1959 expected to be about the same.

During the year 1958 it also reports acquiring its 100,000th space heating account. There were 15,800 space heating customers added in 1958 compared with 16,800 in 1957. According to its annual report, the 1958 space heating additions were divided; 3,800 new homes, 4,300 conversions from oil, 7,700 conversions from coal. The company paid for natural gas an average of 38.6¢ per Mcf.

The Long Island Lighting Co., serving Nassau and Suffolk Counties and the Rockaways, spent for gas promotion in 1958 an estimated $1,750,000 and is expected to spend this year $1,900,000. In each instance about 85% is classified for heating. Compared to other metropolitan area utilities it has made less headway against oilheating, and now appears to be increasing its pressure for sales.

Kingston, N. Y. The Central Hudson Gas & Electric Co. serves the area from South Albany to north of Peekskill along the Hudson River. It spent for gas promotion in 1958 an estimated $52,000 which included $15,600 specifically for heating. This year it is expected to invest in promotion $54,600 including $16,400 for heating. In the town of Kingston only, the total gas advertising this year will be about $5,300 compared with $5,000 in 1958.

Rochester, N. Y. Rochester Gas & Electric Co. serves Monroe and northern Wayne Counties. Its promotional outlay for gas in 1958 was $479,000, this year is expected to be $510,000. In each instance about 60% goes for house heating and water heating.

Philadelphia, Pa. For the city and the surrounding metropolitan area the 1959 budget for gas promotion is estimated by the advertising fraternity at $1,800,000. This includes all uses.

Harrisburg, Pa. The local gas utility serves four counties around the capital city. Its advertising budget for this year is said to be $49,300 of which $38,000 is for heating. About three-fifths of this is allocated to newspapers, the balance to a variety of media.

Baltimore, Md. The Baltimore Gas & Electric Co. covers the city and county of Baltimore, also five surrounding counties. Its 1958 expenditures for gas sales promotion totaled $910,231 and were divided: supervision $106,404, salaries and commissions $370,818, demonstration expenses $66,295, advertising $313,737, miscellaneous sales expense $147,478, merchandising and other $94,501. This is an interesting tally because it shows actual advertising to be 34.5% of total sales promotion outlay.

It was also quite significant that this utility invested in the American Gas Association PAR (promotion, advertising, research) campaign $71,307, and in its television program (Playhouse 90) another $57,902.12.

The utility's gas sales promotion figure of $910,231 in 1958 compared with $761,529 in 1957 for a rise of 19.5%. No estimates are available for 1959 but the market impression is that there's no diminishing of the sales push.

Washington, D. C. For the calendar year 1958 the gas utility spent for sales promotion $404,320.17. There is no projection for this year, but observers report a similar activity. There is no breakdown for heating. However, the utility is said to pay half of the advertising outlays of local plumbers and heating contractors, and there is one estimate that a fourth of its advertising goes this way.

Smithfield, N. C. This is the address of the East Carolina Oil Heat Council which promotes oilheating through 16 counties of the coastal plains region. Natural gas is just getting started in the principal towns but scheduled for all of the larger places. In 1959 the gas company serving this region is spending $12,000 to advertise gas heat; there was none last year. This is expected to build up fast as present line-laying is completed.

Charlotte, N. C. This is the largest community among the 14 counties that make up the North Carolina Oil Heat Council, and the headquarters of the utilities serving the region. Piedmont Natural Gas Co. spent for advertising gas heat in 1958 a total in the Charlotte newspapers of $10,692. In the first quarter of this year it spent $3,007.

However, in this area there is also vigorous competition from electric heat pumps, actively promoted by Duke Power Co. Last year this company spent in Charlotte on heat pump advertising $32,465 and in the first quarter of this year $6,285.

For the entire 14 county area, advertising agency officials estimate that Piedmont Natural Gas spent last year in newspapers $65,000, plus an additional $85,000 for television, radio and outdoor media. Adding to this the outlays of several smaller gas companies in the counties the estimate is that gas promotion came to about $195,000. Of this, $120,000 is estimated as spent for gas heating. Again, thinking of the total 14 counties, the ad men indicate that Duke Power spent at least $50,000 promoting the heat pump.

Greenville, S. C. In this area only, the Piedmont Natural Gas Co. is reported to have spent in 1958 about $18,000 to advertise gas heating in local media. For this year they project a 55% increase.

Here again the Duke Power Co. is promoting heat pump sales with estimated advertising outlays last year of $16,500 and a scheduled 30% increase in 1959.

Spartanburg, S. C. The gas utility here covers Spartanburg and Cherokee Counties with newspaper promotion, plus three other counties on TV and radio. Last year it spent for gas advertising $4,119 in newspapers and

$1,165 on radio, total $5,284. In the first four months of this year it spent on newspapers $1,923, on radio $351, on television $212, a total of $2,486. About 80% of this went for heating ads. About three-fourths of it was spent in the area of the Spartanburg oilheating campaign.

Detroit, Mich. This is the headquarters of the gas utilities that serve lower Michigan, although it does not have an oilheating campaign at present. Rather it is a metropolitan center that has three adjacent promotional programs . . . in Macomb, Kent and Oakland Counties. In separate reports from that Southern Michigan area there is some variance over figures between the two big gas companies. Consumers Power Co. has the business outside of Detroit and Wayne County. Michigan Consolidated Gas Co. is the city utility. If we average the reports we find that Consumers Power will spend in 1959 about $550,000 for total sales promotion to create new business, with about 60% of this aimed at heating.

And while there is no oilheating promotion in Detroit, yet the advertising of Michigan Consolidated will reach the counties where we do promote, and therefore is competitive advertising. This utility is scheduled to spend $750,000 on promotion this year, with half of it on heating.

Duluth, Minn. Here there is no gas available for heating, so the utility spent only $2,500 for advertising last year and will again this year unless the proposed natural gas line gets in. Then the heating promotion will be heavy. Oddly, the pipeline company that hopes to serve the city with natural gas has run some full page ads glorifying gas heat to coax the citizens to put pressure on the present municipal system.

Fort Wayne, Ind. The utility here covers four counties around Fort Wayne. It spent for sales promotion in 1958 about $15,000 and this year it will reach $20,000. It's all aimed at ranges, water heaters and other appliances, since there's no extra supply to expand the heating load. It is situations like this that have allowed oilheating to grow faster in the Midwest in late years where gas is nominally cheap than in the East where it costs more.

Indianapolis, Ind. Here again we find a mark-time situation. The Citizens Gas & Coke Utility (municipal) spent last year for sales promotion $152,000 and will spend $155,000 this year. But . . . none of it is for heating, due to short supply. They are trying to get additional quantities but obviously will not during this year.

St. Louis, Mo. Laclede Gas Co. serves the metropolitan area. Its sales promotion outlay for 1958 is estimated at $350,000 of which $280,000 was spent to promote heating, in the opinion of the local marketers. For this year they are projecting a total budget of $425,000 with $340,000 of it for heating. These are stated as promotional funds, not just advertising.

In this somewhat sketchy outline you have learned of the considerable sums being spent by our principal competitive industry. There are several hundred gas utilities in the nation. Their total investment to make folks like their fuel is obviously very large. They have an important economic advantage in that, while they are limited as to profits, they can carry high promotional sums in their rate-making costs. They can and do finance high subsidies to builders in spots where they have a too-small load for their pipeline obligations. Then builders scream when the subsidies subside.

Oilheating, with its complete freedom of operation, is the better industry, but it does need and can afford a considerably stronger sales promotion push.

Oil Centennial to be Theme at Eastern States Exposition

THE THEME at the Eastern States Exposition, which is to run September 19 through 27 in West Springfield, Mass., will be oil's centennial.

The Exposition, described as the largest of its kind in the United States will attract half a million people from New England and neighboring states during nine days and nights. Oil has been selected as the theme of this year's Exposition and through the cooperation of the petroleum industry a central beacon will be a 97-ft. working oil rig erected on the grounds.

The rig will be the first ever erected in Massachusetts. Complete with its mast, it was shipped 1,300 miles from Tulsa, Okla., to New England by the National Supply Co., Pittsburgh. To show the progress made in oil production during its first century, the rig will be placed alongside a full-scale replica of the wooden Drake well derrick that made history at Titusville.

The Oil Heat Council of Western Massachusetts, Inc., Springfield, has worked long and hard on organization details of the Exposition as far as the Oil Centennial theme is concerned. The Council is readying an oilheating display in the Industrial Arts Building. Two of the big features planned will be the distribution of 50,000 shopping or premium bags imprinted with the slogan, "Oil heats best," and the daily drawing for the winner of a year's supply of heating oil.

Sunday, September 20, has been designated for official Centennial ceremonies with persons of national prominence taking part.

Degree-days and Dollars

Tighter Method of measuring Degree-days increases Profit

by Thomas O. Johnson

IT HAS BEEN SAID that man's mastery of the world began when he stopped guessing and began measuring. The measurement of distance has come a long way since ancient Egyptian days. In those days the forearm was the standard of measurement used to construct the seemingly time-resistant Pyramids.

Degree-days are important to fuel-oil dealers because this measurement allows him to deliver greater quantities of fuel at lower costs than by any other known method. Since development of degree-days around 1930 the term "degree-day delivery" has become a common expression.

Degree-days are conventionally defined as the difference between 65° and the daily mean temperature. Studies show that in general no fuel will be used for space heating when temperatures are above 65°. This fairly well establishes 65° as a proper starting point.

However as man required more accuracy to do a better job the forearm of the Egyptian gave way to precise instruments of our present day. Likewise as more accuracy in measuring fuel consumption would allow us to make larger drops and increase profits it is only natural that a better method of measuring fuel consumption be developed.

Before discussing a better method let's evaluate our present method of measuring fuel consumption. Conventional degree-days usually do a satisfactory job during cold months. In mild weather however "something happens." For example the temperature may climb to 80° for a short time then drop to 50° during most of the night. On this day the mean temperature is 65° therefore no zero degree days. A thermostatically-controlled building or home will use fuel during the time the temperature is below 65°, while our mean temperature degree days indicate no fuel has been used. Refer to FIGURE 1. Conventional degree-days are almost useless in such a case.

Another example of inaccuracy develops during periods of more than normal wind conditions. Various reports indicate that considerably more fuel is used when the wind is blowing than when it is not, other weather factors being the same. This becomes particularly noticeable on accounts with short delivery schedules as it can be windy during the entire period between deliveries. This causes "K" factor fluctuation: result, we have to schedule smaller deliveries in an effort to avoid run-outs.

There are other factors which influence fuel consumption that cannot be accounted for by conventional degree-days. One is the effect of sunshine, a solar-heated home points out this effect, and when temperatures rise or drop sharply and remain at either of these points during most of the 24-hour period. Refer to FIGURE 2.

In many cases "K" factor fluctuation is thought of as just "one of those things." People change their heating habits, play with the thermostat or other factors are attributed to "K" factor fluctuations. There is merit in these arguments. However, people (customers) do not change their ways once they have established them. Your credit department can verify this.

Many degree-day operators know that these conditions exist and apply corrections to help offset the "K" factor fluctuations. One obvious method is to take an average temperature rather than a mean temperature. However, getting an hourly reading is sometimes difficult and when the temperature exceeds 65° the hours sub 65° need to be prorated, necessitating in most cases an hour's work, not to mention the chance of serious error. Another method is the "brute force" method of correction. This is done by shortening the delivery schedule during mild weather, so that even if degree-day information is off by 30% or 40%, customers won't run out, "dries" as they are referred to in Brooklyn. With this method the size of the drop decreases, which means operating expenses increase, customers are happy but profit takes a nose dive.

With positive degree-day information, that is degree-day information which compensates for wind, sun and mild weather conditions, the size of drops can be increased. If 90% of your customers' "K" factors fluctuated by less than 10% then you could safely plan 210-gallon drops to 275-gallon tanks and know that the drop would be between 191 gallons and 231 gallons. No run-outs would result and a substantial delivery made.

Here is what would happen on an account using an average amount of

Thomas O. Johnson is manager of Oakley & Oldfield and president of Johnson Degree Day Systems, manufacturers of the Johnson Fuel Demand Meter. He worked on the development of the meter with his father for three years before it was introduced in 1955. Oakley & Oldfield is a retail fueloil company. Both firms are located at 329 South Pitcher Street in Kalamazoo, Mich.

fueloil (1,500 gal. per year), if we increased our drop size from say 185 to 210. This account would require approximately 8.1 stops per year delivering 185 gallons per stop. At 210 gallons per stop this account would require approximately 7.1 stops per year or one less stop.

Not much of a saving! Take another look. It costs the average fueloil company $2.31 per delivery.* Multiply this by the number of accounts you have and it amounts to a sizable sum, most of which represents net in terms of profit. It takes just a few seconds more to pump the additional gallons, but compared to driving time, dispatching time, pulling hose, etc., there is no more time involved in making the stop with the increased size of delivery. This is especially true with the increased pumping speeds many companies are now employing.

It is obvious that with more accurate degree-day information profits can be increased. With this in mind the Fuel Demand Meter was developed. It determines the average daily temperature by "integrating" sub 65° temperature. By proper design it was possible to make the meter account for increased fuel consumption caused by wind and decreased fuel consumption caused by the effect of the sun's radiation. These effects are in direct proportion to fuel consumption. The extent to which the meter accomplishes its purpose can be judged from the following reports and data.

A group of ten typical cards were selected at random from our degree-day files. Each had at least one delivery per month beginning in October. The factors of all houses were averaged for each month and compared. The maximum "K" factor variation from average was ± 2%.

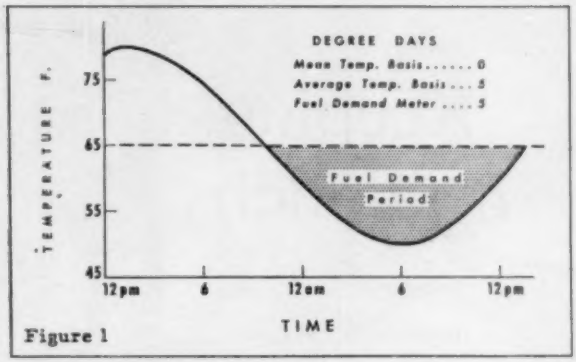


Figure 1

Within a four mile radius of Kalamazoo there are three official weather stations. Two of these stations, including the official State station, are within two miles of our bulk plant and meter. All stations are within our delivery area. On a cold day it is not unusual for the weather stations to have as much as an eight degree difference in the reported low temperature. It is more common to have different low and high temperatures reported than to have identical readings. It is evident that temperature variations exist in this area. Under these conditions the Fuel Demand Meter indicated accuracy within ± 2%.

FIGURE 3 tells a very complete story on measuring degree-days and the accuracy of the meter. These curves show the variations in "K" factor for a typical large home from delivery to delivery. CURVE 1 shows the "K" factor when conventional degree days are used. CURVE 2 is plotted using "effective" degree-days obtained from the meter. "Effective" degree-days include all effects of weather which enter into fuel consumption, temperature, wind, sun, etc. Deliveries were made at about every 500 "effective" degree-days.

It is important to remember that had there been no human factors causing variation, we would have had a perfectly straight line. This is shown in CURVE 3 of figure 3. It is evident that the meter readings closely approached this condition while conventional degree-days varied considerably from our desired straight line function. It is important also to note that the greatest fluctuation in conventional degree-days occurred in mild weather. This is the period most of us experience our greatest difficulties with conventional degree-days.

In FIGURE 3 the "K" factor by conventional degree-days varies more than 20% while meter readings hold within 3%. In over 1,400 cards checked constantly by this method most cards hold within 6% "K" factor variation. Many cards hold within 2%. All cards show a much wider variation when conventional degree-days are used.

With accurate degree-day information fewer run-outs occur, less clerical time is needed to make corrections, and larger drops can be planned—yes, dollars and degree-days.

*This figure is based on the best possible national average and includes drivers' wages, dispatching time, bookkeeping time, depreciation on equipment and overhead expenses.

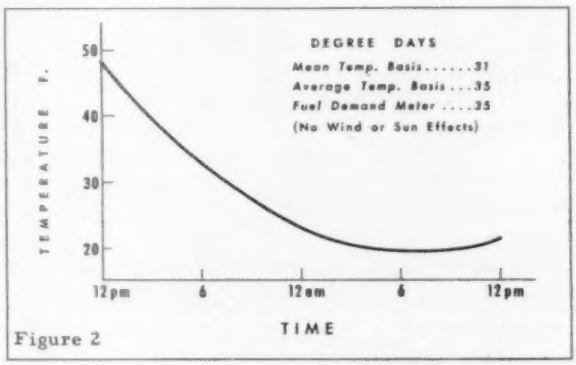


Figure 2

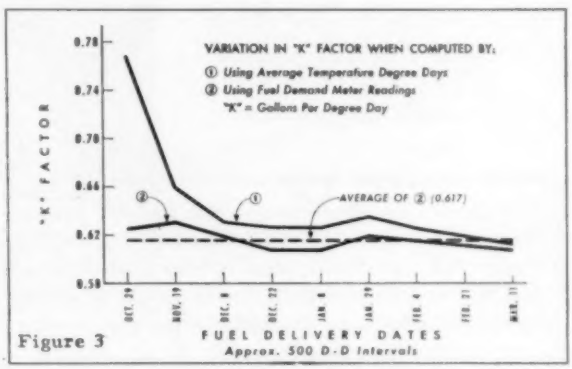


Figure 3

Keeping in Touch

The best Service is immediate Service; Valley Oil uses Radio to save Time

by William F. Briggs, Jr.*

YOU CAN LEAD a customer to buy your fueloil, but you won't keep him if your burner maintenance and oil delivery services aren't as good as your sales department. That's why we at Valley Oil Co. put heavy emphasis on the service end of our fueloil-oil-heating business.

New salesmen ride our fuel trucks and go out with the burner servicemen and installation crews so that they know how the oil is delivered and the equipment installed and maintained. Then they can talk intelligently with prospects with full knowledge of what type of service we provide.

But just talking about good service is not enough. We've gone all out to provide our customers with the best possible service . . . with the least inconvenience to them. Approximately 2,000 of Valley Oil's customers have bought our $31.95 service contract, which includes parts, service and an annual burner and furnace cleaning. And to insure that these customers get immediate service, we have installed a Motorola two-way radio system.

To our way of thinking, two-way radio is one of the best service aids to come out in the past decade. During the first winter, we had a number of calls for service which the driver was able to answer while the customer was still talking to our dispatcher. Earl Sweeney, sales manager, recalls one instance in which he answered a call while filling in for the dispatcher, and said to the woman "Now that we have two-way radio, we will give you immediate service."

The woman hung up, but called back in a few moments and said "Don't you think you were being a little flippant?" While she was saying this the serviceman knocked on the door. She asked, "Do you really have two-way radio, or is this just a coincidence?" The driver told her about two-way radio and even gave her a demonstration of its use.

I don't doubt that this customer will always remember this service. And I am sure that she told all of her neighbors about it. Can you think of a better way to make an impression on a customer or to convince her that your service is really tops?

The benefits from the two-way radio system are not limited to the customers, of course. The policy of treating the customer like a king with the aid of two-way has paid off in increasing sales each year. You are well aware that there is no finer advertising than word of mouth recommendations.

We have always stressed to our employees that it is not wise to use a customer's telephone. We reason that the customer may feel imposed upon, and also that there is a possibility of the serviceman soiling a rug or carpet. It takes only one soiled rug to tarnish a reputation not only with that particular customer, but also with her neighbors. Avoiding the use of others' telephones has been a problem, since we want to contact each man after every service stop to advise them of new calls. Two-way radio has proven just right for this need.

Appreciable savings have been realized directly for Valley Oil, as well, from the radio system. Before radio, servicemen would drive into the yard each morning to get their first call. In addition to losing time required to drive to the yard, there were also delays of as much as half an hour before the men started on their first calls. Now they radio each morning when they leave home for their first jobs.

*Service manager, Valley Oil Co., Inc., Portland, Conn.

A good sales department can get the customer. To keep him requires an alert service department and oil delivery system. Valley Oil has found that two-way radio benefits the customer and keeps him satisfied. Radio saves the firm time and money by reducing mileage which really pays off during the peak seasons.

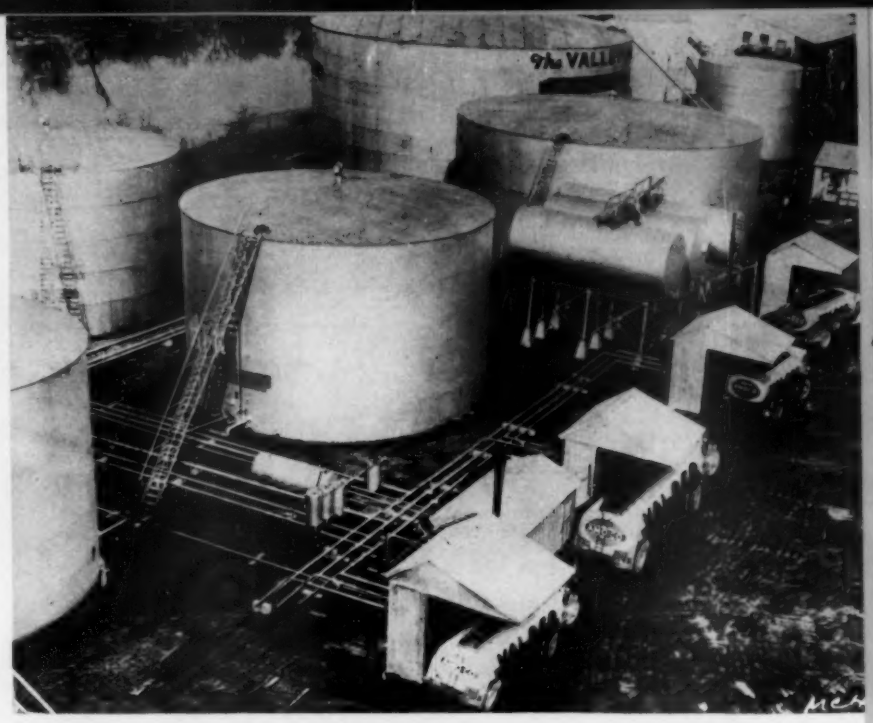
When finished, the men get their orders on next jobs via radio. This has resulted in a sizable decrease in mileage formerly lost by runbacks. This saving, we estimate, amounts to approximately one call per truck per day, or for our fleet of service trucks, 14 calls per day. Where the reduced mileage really pays off is during our peak season. During these hectic days, we find it much easier to handle peak loads without working until nine, ten or eleven o'clock each night, and without keeping our customers waiting.

Better Supervision

There has been a noticeable improvement in supervision and vehicle control. Our head serviceman, Henry Mitzer, is now a working foreman, yet he has better control of his men. Before we installed radio, whenever he went out on the job, his men were unable to call on him for assistance. But now he can be contacted at any time, if need be, on the road or at a customer's house. In many cases, he is able to provide information over the radio that enables them to complete a job sooner.

Faster billing is a benefit that you might not expect to find. However, by having drivers call in after each stop and report the materials and time required for each job, the billing department is able to get the bill out of the office the same day. Consequently the bill reaches the customer while he still remembers that "yesterday his oil-burner was repaired and now his house is nice and warm." For this reason he tends to pay his bill sooner than he would if five, ten or more days passed before he received his bill.

We first heard about two-way radio through the trade journals. Our interest was piqued and, all of us were on the lookout to see such equipment demonstrated and described. About a year and a half after we first became interested in radio, we settled on a Motorola system.



Our system consists of a 60-watt base station located at the top of a hill just outside of Portland, Conn., and remotely controlled from our main office in the city. Fourteen vehicles of our fleet of 50—ten service trucks and four oil trucks—are at present equipped with mobile radio units. Our vehicles service an area 50 miles in diameter and this is the coverage provided by our radio system.

Before the radio system was installed, we used to maintain two dispatch points for our service vehicles—at Meriden, as well as Portland. These towns are 10 miles apart and our dispatching offices were connected by direct wire. After completing a call, the drivers would call the nearest dispatcher to file his report and pick up the next order. The radio has enabled us to eliminate the need for the second dispatching office, as well as to pick up the savings in phone calls.

Summing it all up, we feel that two-way radio has enabled us to cut in half the time that it takes to get a customer service on his burner. This makes the customer happy, and because of subsequent savings and increased business, it makes Valley Oil happy too.

Valley Oil's President William Briggs, Sr. (right) discusses with George Stetson, general manager, how two-way radio boosted the number of calls handled.

Plymouth, Mich.

OILHEATING MARKET REPORT

THE PLYMOUTH oilheating market includes about two-fifths of Wayne County, Michigan, in its northwestern corner, plus adjacent, smaller parts of Oakland County to the north, and Washtenaw County to the west. Overall, this section covers a rectangular area of a bit under 400 square miles. Its eastern boundary flanks metropolitan Detroit.

This is another case where our market does not tally with any established geographical unit; for that reason certain statistics available, such as Census data, can not be utilized as suitable reference bases.

The population of the area is currently estimated at about 160,000. This is growing at a substantial pace. In ten years the population is expected to reach double this figure.

As of the beginning of 1958, our estimate for total dwelling units in this market comes to 53,775 households. No more than 10% of these represent multiple dwelling units, we believe. The balance, of 90%, or 48,500 homes, are one- or two-family dwelling units. The majority of these individual units—about 60%—are of the low-cost variety, valued at between $8-14,000. Some 30% are in a middle-cost valuation range, $15-20,000, while about 10% are of the more expensive, "custom" type, valued at from $25,000 up.

Home heating Characteristics

Neither of the earliest records—fueloil ration permit data for 1945, nor the 1950 Census reports—provides data which can be correlated with this specific market territory.

On the basis of 48,500 one-and-two-family dwellings in the market, and through correlation with other general referecnes, however, we estimate fuel usage for central and non-central heating in these homes to be apportioned as follows, as of the beginning of 1958:

Residential heating Usage

Fuel	*Central*	*Non-Central*
Coal	3,500	2,000
Gas	11,100	2,200
Oil	21,700	5,750
Other	1,000	1,250
Total	37,300	11,200

While there is no prior installation figure against which to measure its decline, it is understood that coal heat has lost a substantial share of its market to competitive fuels. The oilmen with whom we discussed this point feel that this decline, since 1950, has been on the order of 70%. Therefore, about 18,300 coal installations are indicated as being in use in that year.

In addition to the 21,700 centrally-installed oilburners in residences, there are an estimated 2,016 (8.5% of the total) domestic-type burners in use in small multiple dwellings and in small commercial establishments. Thus the total count for all centrally-installed, distillate-burning domestic-type systems is 23,716—5% of all such oilburner installations in the state.

Competitive Fuels and Costs

Bituminous coal is the solid fuel variety commonly sold in this market. In the sizes for hand-firing, it runs as high as $30 per ton. The heat content in the higher grades of this fuel runs around 14,500 Btu per pound. This is the equivalent of 10.3¢ per therm. In the stoker sizes the cost is considerably lower ($19 per ton) at 6.6¢ per therm.

Natural gas service has been available in this section of the country for a long time, introduced as early as 1930. Supplies of the fuel have not ordinarily been adequate to meet the demand, however. This has substantially limited its expansion. In the Plymouth market, Consumers Power Company provides gas utility services. Electric service is furnished by another utility, the Detroit Edison Company.

Gas fuel, of 1,000 Btu per cubic foot, is furnished under the usual "step-down" rate schedule, and reaches its lowest price of 7.6¢ per hundred cubic feet for all quantities over 10,000 cubic feet per month. This quantity amounts to 100 therms in heat value. Thus, even making allowance for 25 therms of gas consumption monthly for cooking and water heating in the higher, initial rate "blocks," substantial amounts of the fuel, if used for householding, would be billed at next-to-lowest rate of 10¢ per Ccf (or therm). In a typical householding example, requiring 1,200 gallons of fueloil per year—or the equivalent of 1,680 therms of gas—the cost of gas heat works out to $160.15, or an average cost, per therm, of 9.5¢. This is lower, by 16%, than the cost of oil heat would be in this case, based upon a tank wagon price of 15.6¢ per gallon for No. 2 fueloil.

The 15.6¢ per gallon retail price for No. 2 heating oil works out to the equivalent cost of 11.4¢ per therm.

Fueloil Distribution

Although difficult to figure, for reasons stated, our estimate for the total annual volume of No. 2 fueloil sold in this territory indicates just under 33 million gallons. Almost exactly one-fifth of this gallonage, or 6½ million gallons, is burned in small commercial establishment-multiple dwelling applications, where domestic-type, power-driven oilburners are centrally installed. Another 5¾ million gallons of No. 1 or kerosene, we estimate, are also sold annually for space heating.

In the so-called Livonia section—a roughly rectangular portion about six miles wide by six to seven miles in depth, north-south, centering around Livonia—virtually all of the retail distribution is handled on a direct basis by various supplier companies. The total retail gallonage in this portion of the market represents about 16½ million gallons of No. 2 fueloil annually.

In the balance of the territory, however, distribution is handled through independent resellers, or dealers, who do virtually all of the retail business. Among this class of marketer, one in twelve, approximately, maintains no bulk storage facilities—is a "yard buyer," purchasing product "under the fill." This class of dealer accounts for only a small part of the Plymouth-section retail gallonage, under 5%.

As far as the wholesale distribution of fueloil is concerned, the major companies distribute, or bring in, most of the total volume. About 91% of the entire wholesale gallonage is handled by these integrated companies; no more than 9% by independent or local refiners.

Automatic deliveries are made to about 55% of all fueloil customers, and, while this leaves room for improvement, the trend toward "keep-filled" supply is marked. A high proportion of oilheat users' storage tanks are equipped with audible-type fill signals. And about 14% of all customers avail themselves of formal "budget" payment plans offered by the dealers.

A somewhat surprisingly low percentage of the independent dealer companies, for a midwestern market, handle gasoline in addition to fueloil. The local oilmen estimated this number to be about 8% of the dealer firms. Dual fuel dealers, who sell coal and fueloil, represent around 12% of all companies. The percentage who handle oilburning equipment is very low—less than 2%—even lower than the typical midwestern market. Fueloil men sell less than 5% of the market's oilheating installations.

Market Concentration

A count of the dealers operating in this market, including commission agents, reveals a total of 16 reseller firms, operating 74 trucks in all, or an average of 4.6 trucks per company. There may be a few additional independent resellers not accounted for, but they would be one-truck or part-time operations.

Four companies each operate fleets of three delivery trucks each.

Six companies operate, respectively, 2, 6, 7, 8, 9, and 10 trucks each.

Two companies operate, respectively, 1 and two trucks each.

Oilburner Service

The fueloil companies render equipment service to some slightly greater degree than in the case of the original sale and installation of oilburners. It is estimated that 12% of the market's total service work is handled by them.

Service or equipment maintenance contracts of the type offered generally by the industry in other areas are not common to this market. Only about 4% of all oil heat users are availing themselves of this protection. Another 32% of the installed oilburners in the area receive some sort of inspection and tune-up annually (not under contract).

The average cost level of the isolated service-maintenance plans offered locally runs to about $32 for the service contract that includes parts replacement. The median charge for the contract without the parts-replacement feature (among the few companies offering this plan) is just under $18.

Annual clean-ups cost about $15.25 per job. Regular service calls, when performed by the fueloil companies, bill out at an average of $6.13 per call per customer.

Advertising Promotion

As elsewhere, generally, there has been but limited advertising promotion of oil heat by the individual supplier companies. The local oilmen with whom we talked felt that efforts in this direction had not been extensive. A few believed that such advertising had been "moderate."

The dealers themselves have not gone into promotion of oil heat individually to any great degree either. The consensus was that only about 8% of the independent marketers advertise oil heat, on their own, through regular media channels. In such efforts, typical expenditures run around 92¢ per existing fueloil account, or to not more than ½% of total gross revenue.

Oilheating in this area has enjoyed a healthier market in recent years than has been the case in neighboring, metropolitan Detroit. Restrictions on installation permits for gas heat have restrained the competition. With some loosening in prospect for gas heat permits, the local oilheating industry is convinced of the need for cooperative protection of their market through promotion.

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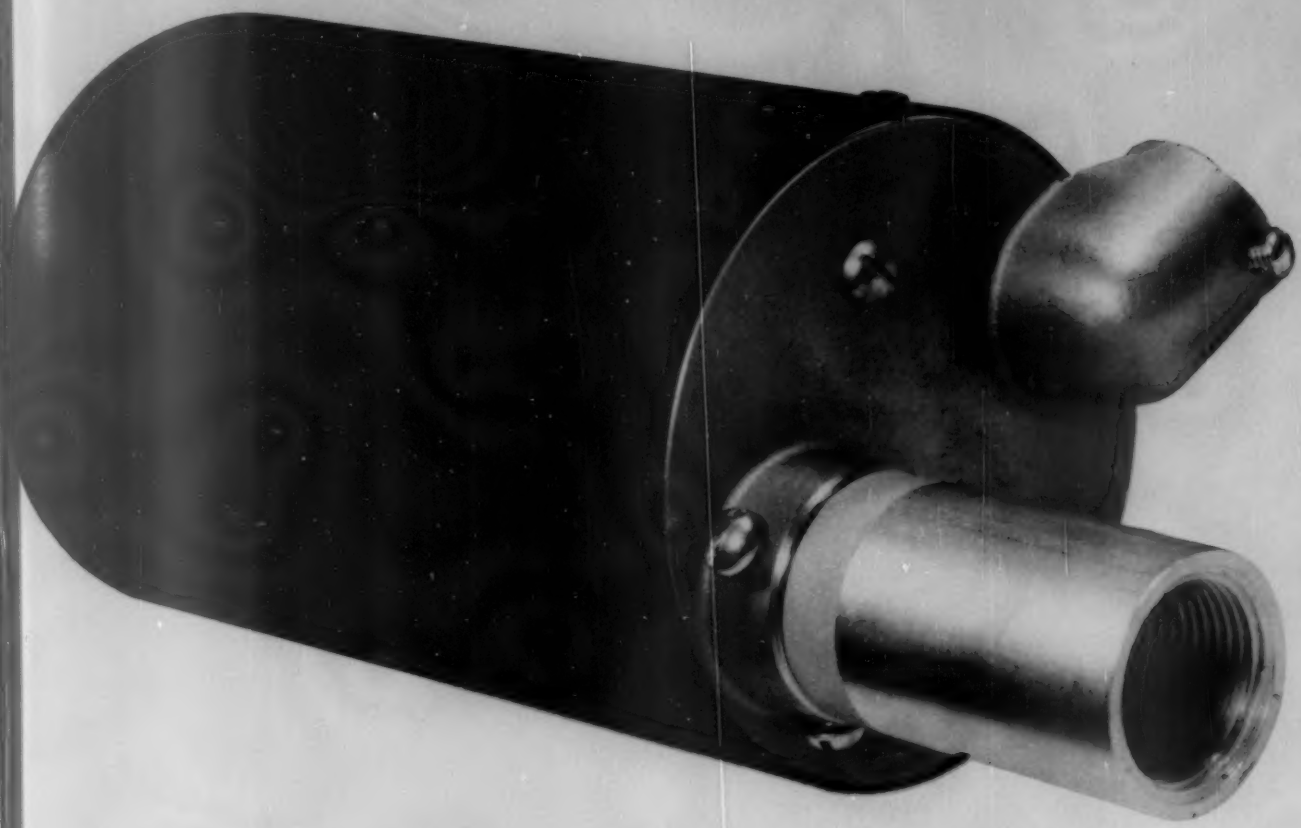
HONEYWELL'S NEW C7012A

Ultra-Vision* Flame Detector



senses only the flame!

no more hot refractory hold-ins

USE OF ULTRAVIOLET RAYS REVOLUTIONIZES SAFETY STANDARDS IN FLAME DETECTION DEVICES FOR GAS, OIL AND COMBINATION GAS-OIL INSTALLATIONS

Honeywell's new ultraviolet sensor represents a major breakthrough in scientific flame detection. This revolutionary device employs an amplified ultraviolet signal to positively distinguish between an actual flame (ultraviolet rays) and a hot refractory (infrared rays). For the first time, you can be *absolutely sure* that fuel delivery will be stopped in the absence of flame.

This new control device is compact. It simplifies flame supervision of both single and multiple burners since the Ultra-Vision Detector, not being sensitive to a hot refractory, can be aimed at each individual flame in the most convenient way. This is the only device on the market that offers you this advantage.

Is it economical? Consider this: The amazing new Ultra-Vision Flame Detector will actually pay for itself in simplified installation and maintenance because—

• wiring is less expensive in this system than in a lead sulphide cell • it can be installed easier because in flame sighting hot refractory can be ignored • there is no further need for flame rod replacement.

*Trademark

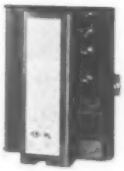
HONEYWELL'S NEW C7012 IS "SYSTEM ENGINEERED" FOR USE WITH ANY 2- TO 4-SECOND FLAME RECTIFICATION RELAY!

The Honeywell Ultra-Vision Flame Detector is designed for safe, foolproof flame detection when used with any of the following flame safeguard relays:

FOR MEDIUM BURNERS—RA890E PROTECTORELAY
The RA890E is a basic rectification relay ideally suited for use with the new C7012A Ultra-Vision Sensor. It's designed especially for pressure-gun oil burners, small combination gas-oil burners and gas-power burners.

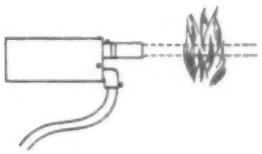
FOR INDUSTRIAL PROCESSING BURNERS AND OVENS—W124 PROTECTOGLO
Provides extended purge timings and cutoff of the main flame. Pushbutton and signal lights are a built-in feature of this system. The Ultra-Vision Flame Detector provides safe, dependable flame detection when used with the W124 Protectoglo.

FOR INDUSTRIAL PROCESSING AND COMMERCIAL BURNERS (requiring manual start and complete cutoff on flame failure)—**R485 PROTECTORELAY**
Used with the new C7012, the R485 Protectorelay insures trouble-free operation and no "down time"—this system senses only the flame, never a hot refractory. The safety features of the R485 include a warm-up timer, a self-start check and a safe-operation check for immediate shut-down in event of abnormal conditions.

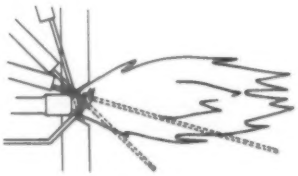


FOR LARGE CONVERSION BURNERS—R478 PROTECTORELAY
Here's an electronic programming relay for large horizontal rotaries, combination gas-oil burners, steam-atomizing burners and large power gas burners. The R478A may be used with the C7012A Ultra-Vision Sensor when burner sequencing is needed.

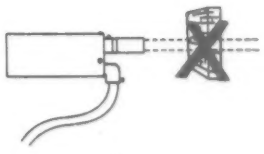
HERE'S WHY HONEYWELL'S NEW C7012 IS SO VERSATILE!



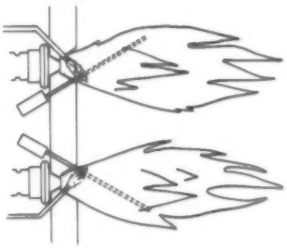
New Ultra-Vision Flame Detector sights flame of all fuels.



New Detector does an effective job on single burner pilot and main flame installations.



C7012 is not affected in any way by a hot refractory.



With Honeywell's new C7012, multiple burner installations can be monitored safely for the first time.

FOR MORE DETAILS, CALL YOUR LOCAL HONEYWELL OFFICE, OR WRITE TO HONEYWELL, MINNEAPOLIS 8, MINNESOTA; PHILADELPHIA 44, PENNSYLVANIA; OR TORONTO 17, ONTARIO

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Modern Oilheating for Schools

Part 1—Selection of the Fuel comes first in planning proper Heating of a School; Oil has many Advantages

by Jean L. Dupuis

THE EXECUTIVES planning a new school must decide on the type of boiler-room equipment that will be used to provide the school with heat and hot water. Their decision is important; it will affect the operation of the school, and the schoolroom comfort during each heating season, throughout the years the school will be used.

In the past, both good and poor decisions were made in selecting boiler-room equipment for schools. That's brought out by studies of existing schools, which have been in use for some time.

Certain existing schools are being heated economically, dependably, safely, and in a fashion that causes no complaints about improper heat and resultant discomfort. In these schools, heating-system shortcomings do not exist and do not impair the comfort and health of the school occupants—the teachers and students.

However, other existing schools prove to be heated poorly. In some of these, fuel bills and over-all costs related to heating are sky-high. In others, the heating plants limp along usually, and break down too often. The maintenance and repair expenses of certain heating systems, in schools, are running so high that the executives in charge have lost all hope for ever put-

The Battle of Fuels is being fought with fierce intensity in the realm of new schools. In no other field of heating, is Old Man Coal as far from being lifeless and dead. In instance after instance when the fuel for a new school is being selected by school board members and architects and engineers, a squad of fuel utilization experts representing coal interests moves in on the scene and puts on a formidable and truly excellent performance to swing the school-heat decision to coal. Fueloil men should not make the mistake of underestimating the amount of good fight left in Old Man Coal, in the realm of new schools!

But gas-heat men also concentrate on new schools which can receive gas by pipe line; these opponents, also, can pack powerful punches!

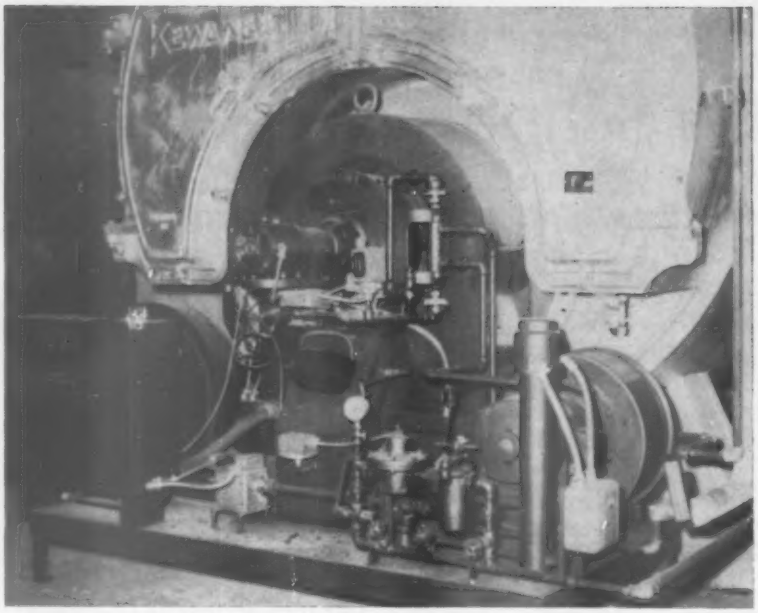
New now in the Battle of Fuels, concerning new schools, are electric-heat men — with technical ideas and arguments so far out ahead and startling that they can mesmerize school-board members. To the amazement of certain oil-heat specialists, who up to now comfortably have thought electric heat was absurdly out of line costwise for schools, the electric-heat industry can boast now that it has won out in more than a few, new, large and impressive schools which are under construction, or which have just been completed.

The fact is that many oil-heat proponents must learn now, for the first time, how to fight electric heat—while fighting coal heat and gas heat at the same time!

This article, the first in a series, is aimed to help oil-heat proponents in that part of the Battle of Fuels which is centered around the fuels and methods that will be used to heat new schools. Oil-heat men need all the technical facts they can assemble, to win out in this phase of the Battle of Fuels.

Commercial & Industrial Oilburning Section

fueloil & oilheat



ting the heating systems into excellent, or even passable, condition.

Certain schools now in use were planned years ago, when coal was used widely for heating, and still are heated by coal today. Men who are paid only laborers' wages have complete charge of the coal-heating systems in many of these schools. To keep the school heating plants going, these men must handle tons of coal, and vast amounts of ash. In addition to doing laborers' work of this kind, surprisingly these men are expected to employ brains and skill to regulate the amount of heat the boilers provide for the school rooms.

Under these conditions, the students and teachers are highly likely to suffer discomfort during the heating season. Even the illnesses of common colds, sore throats, and so on, can result . . . because seldom are the schoolrooms heated correctly, as the result of precise control of the heat. Often, the schoolrooms are cold and chilly and drafty when the schools are first opened on cold mornings. Often, the poorly-regulated heat gets out of hand with the result that the rooms become unbearably hot and stuffy.

In the early 1930's, oilheating started gaining the popularity it has today, and to fight oil heat some factions in the coal industry started recommending the use of coal-stoker machines. More than a few such machines were installed, in the 1930's, in homes and commercial-industrial buildings. They were supposed to reduce somewhat the muscle-work required for coal firing, to gain higher efficiencies than come of shoveling coal on grates by hand, and to work well with modern, electric, heat-control devices.

In homes, in residences, coal-stoker machines quickly lost the little, early popularity they once had—back in the 1930's. A man building a new, modern home today does not consider heating it using coal that's hand-fired or stoker-fired. Tons of coal in the basement, and cans of ashes, don't fit the concept of a modern, American home.

In large buildings, including schools, push-button control of stoker-fired boilers often has been dreamed of. The dreaming has included coal conveyor systems, electrically powered, which automatically or at the push of a button will take coal from vast, coal bins and transport it neatly to boilers—without any muscle work. Also in the dreaming are conveyor systems that handle all the ashes without any need for manual labor.

In this world of dreams, the use of coal for heating a school would require no more, or little more, manual labor than is needed for boilers fired by fuel-oil.

Unfortunately, things work out that way only in a dream world. In the typical boiler room of a school which has coal-stoker machines, as things actually work out today, much work must be done by men with strong muscles to transport the coal from its bins to the stokers, and to move cans of ashes out of the boiler room.

Men who can be hired to tend to coal-fired boilers are usually men who make a specialty of working their brawn and muscles—they do not make a specialty of having brains, and using them to make incomes.

Thus, an objection to heating a school by the use of coal lies in the fact that the men who can be hired to shovel coal are unschooled laborers who waste much of the heat in the coal they handle. To burn coal at reasonable efficiencies, in school boilers, takes a certain amount of training or education in the fields of coal-handling and combustion. But laborers are the only men who can be hired to handle tons and tons of coal using shovels—and these laborers have not been trained to use the highly specialized coal-firing methods which are needed to burn the coal at high, or even reasonable, efficiencies. The heating of a school by coal necessarily is wasteful, as the consequence of this; much of the heat in the coal is lost or wasted, because the coal is fired at appalling low efficiency.

In a modern school, the aim should be to have the boilers highly efficient, so that the fuel bills and heating costs will be low.

A boiler in a modern school should be so well heat-insulated on its outside surfaces that it does not give off enough heat to make the boiler-room temperature excessive. Excellent boiler insulation materials are "85% magnesia," and rock wool, and glass wool.

With an oilfired boiler insulated so well that the boiler-room temperatures are not excessive, the boiler's only loss of heat is the heat that goes up the chimney. That's called the "stack loss."

The usual practice of oilburner men is to work towards minimizing this

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a tank suction heater with easily accessible service connections

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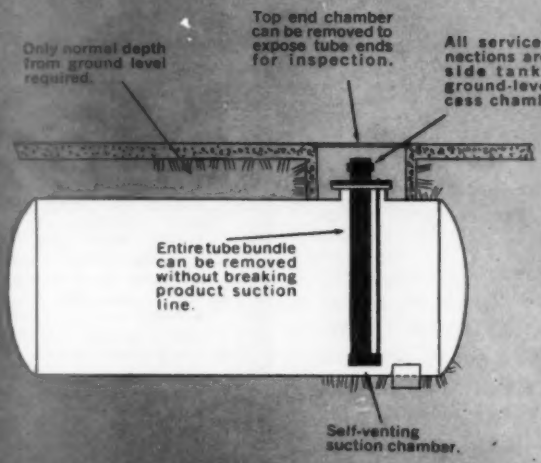
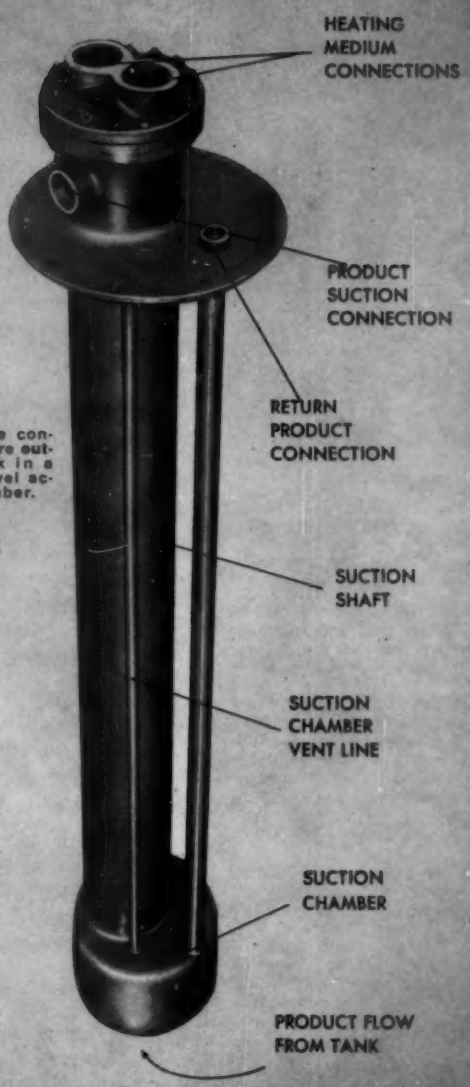
VERTICAL TANK SUCTION HEATER

Designed to simplify both installation and service. Heater is suspended from tank manhole flange. **All connections are outside the tank.** A new Paracoil invention.

Uses hot circulated fluids as heating mediums — insuring positive suction temperatures.

The simplest method of preheating fuel oils and other viscous liquids in underground storage tanks.


Only normal depth from ground level required.
Top end chamber can be removed to expose tube ends for inspection.
All service connections are outside tank in a ground-level access chamber.
Entire tube bundle can be removed without breaking product suction line.
Self-venting suction chamber.



Hot return product mixes with fresh product in suction chamber, providing an initial temperature rise even before the heating tubes are reached.

Available in standard sizes and capacities for various product fluids.

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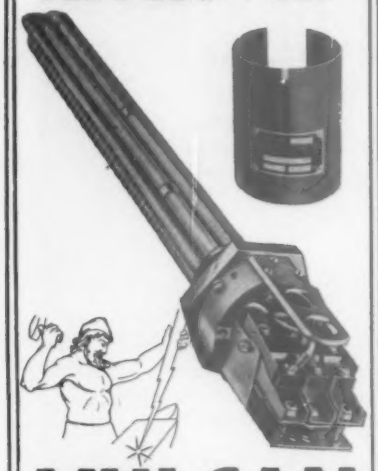

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Suction or Return Line Heaters have standard wattage range of 6 kw through 38 kw, voltage ratings of 208, 240, 480, and 550. They are available with 2" NPT screw mountings or 3", 5" and 6" standard pipe flanges. Circulation heaters may be ordered completely assembled with insulated shell and jacket.

Available for stock shipment in most sizes.

OEM and jobber inquiries are invited.

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COMMERCIAL & INDUSTRIAL oilburning

"stack loss" (the boiler's only heat loss) by the use of special, combustion-testing instruments. These include: A gas analyzer that determines the carbon dioxide content of the flue gases; a draft gage to measure chimney draft and its effect on the boiler efficiency; an instrument that measures the slightest smoke or haze of chimney gases; and a stack thermometer that indicates the temperature of the hot gases leaving the boiler and flowing on to the chimney through the smokepipe.

These instruments are used in oilfired boiler rooms, as everyday practice, to assist in arriving at peak efficiencies. But these instruments are not used regularly in boiler rooms having coal-fired boilers—all-in-all, coal is used at such low efficiencies, in school heating boilers, as to be far below the realm of any instrument checking. Coal is expected to be wasted to such a degree that checking its waste by instruments is beyond reason. That's one reason fueloil is used at high efficiencies in school boilers, while coal is used at low efficiencies.

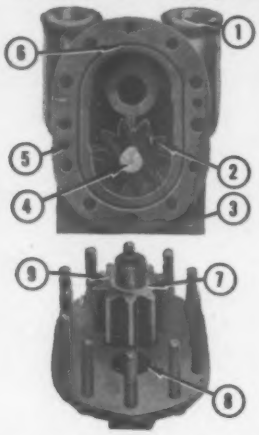
Coal-fired boilers in schools do not obtain the fuel-saving advantages provided by combustion-testing instruments, but oilfired boilers do obtain these advantages.

Fueloil has another advantage over coal, which also gives higher efficiencies with oil than are obtained with coal. Coal-fired boilers suffer a fuel-wasting loss which oilfired boilers are free of. That's the loss of heat, of the coal-fired boilers, represented by the presence of burnables, of unburned coal, in the ash cans. Oilburners need no ash cans, and thus cannot have this ash-can loss of heat. Using coal, however, this ash-can loss of heat can be high, and can contribute to waste of fuel, thus can be a cause of high fuel bills.

If coal is being considered at all for heating any school of considerable size, then two types of coal should be considered. One type is anthracite,

NEW! Heavy fuel oil PUMPS

for Mechanical Atomizing Burners



As a complement to our line of Class 60 internal gear pumps, the new Class 66 external gear design extends the working pressure range to 300 psig with the same outstanding performance features expected from Kraissl products developed through 30 years' experience.

Important design features . . .

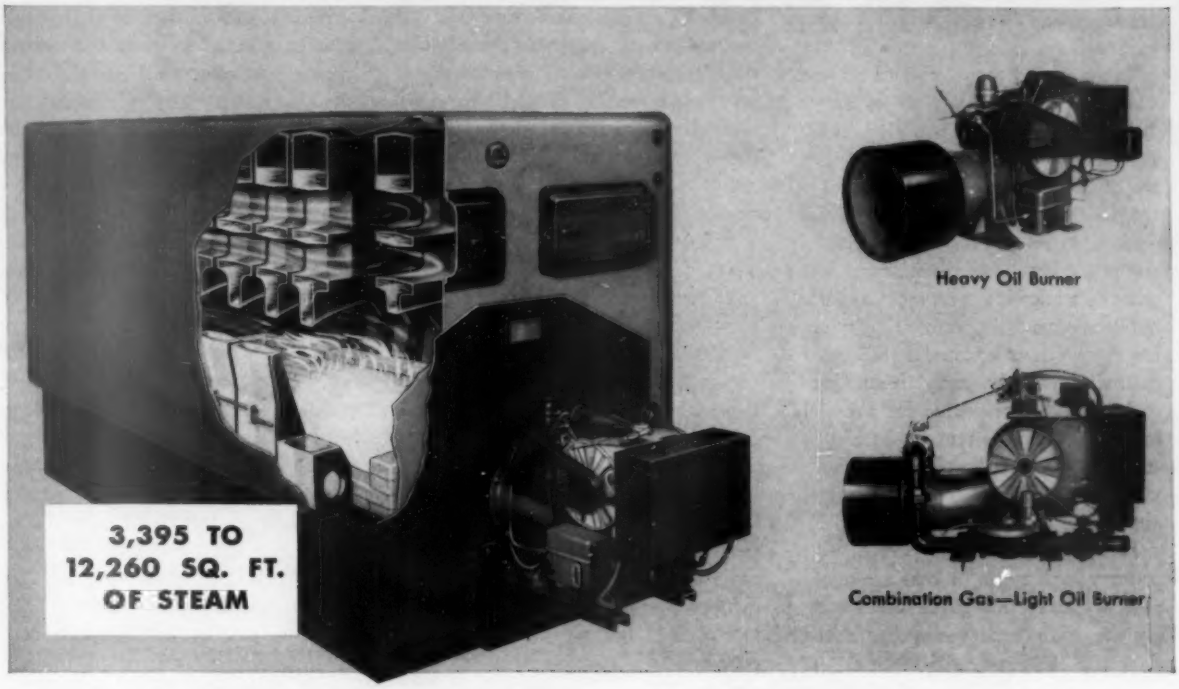
1. Ports in end plate provide easy access to pump interior and parts replacement without piping disassembly.
2. Pyramid tooth form provides maximum gear strength.
3. Flange mounting on end plates permits use of foot or direct mounting into machine or drive.
4. Integrated Rotor and shaft provides strong assembly with no weakening due to internal keys or pins.
5. Dowel pin alignment facilitates accurate assembly with proper working clearances.
6. Grooves vented to pump suction eliminate gaskets and insure face and end plate sealing.
7. Bearings are assembled close to load to minimize shaft deflection. Provision is made for renewal of lubricant.
8. Shaft seals isolate main shaft bearings from abrasive liquids.
9. Hardened idler increases pump life.
10. Interchangeable return seal (not shown) vents stuffing box to pump suction to minimize chance of shaft leakage while also providing simple change of rotation in the field.

Write for Bulletin A-1847. Other Kraissl fuel oil products include . . . Single and Duplex Strainers • Light Oil Pumps • Compressors

KRAISSL CO. Inc.

295 Williams Ave., Hackensack, N. J.

FIRST! CAST IRON BOILER-BURNER UNITS FOR No. 5 OIL OR COMBINATION GAS—LIGHT OIL



These Weil-McLain units are furnished with air atomizing, pressure type burners, completely integrated with electronic controls and factory-engineered combustion chamber design. The Oil Heating Units, while primarily designed to burn low-cost No. 5 oil, will efficiently handle all grades of lighter oils. The Combination Gas—Light Oil Units will burn either gas or No. 2 fuel oil.

Heavy Oil Burners

These burners furnish all the air needed for combustion. The accurately metered oil is intimately mixed with air into a highly combustible spray in the nozzle. Burners start with a small flame which gradually builds up to proper size. Safe operation is assured by electronic control.

Combination Gas—Light Oil Burners

Units consist of a power gas burner and a high pressure air atomizing burner, with high efficiency assured by correct metering of air and fuel. For both gas and oil operation, burner starts with small flame and builds up to required size. Electronically controlled with pre-purge and post-purge . . . manually or automatically changed from one fuel to another. Send for Bulletin C-272.

Burner service provided for one year, including start-up

For information on other Weil-McLain Gas and Oil Boilers, see Engineers' Product File or Sweet's Architectural File.

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ICH AND ICL 40 AND 44 BOILER-BURNER UNITS

FOR COMMERCIAL AND INDUSTRIAL HEATING SYSTEMS

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BOILERS · RADIATORS

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Address literature requests to Dept. B-99

which is called hard coal; the second type is bituminous coal, which is called soft coal.

In the earliest considerations of these two types of coal, the use of either type may be ruled out quickly because it is not available locally compared to the other, or would cost far more per ton than the other because it would come from distant mines. With anthracite-producing mines within a few miles of a school, for example, the use of bituminous coal (produced by mines far more distant) would not be considered. Similarly, only bituminous coal would be considered for a school located near mines that produce such coal, but located hundreds or thousands of miles from mines producing anthracite.

However, in a small part of this country both types of coal are available at prices that make them competitive with each other, hence the advantages and disadvantages of each type of coal need study.

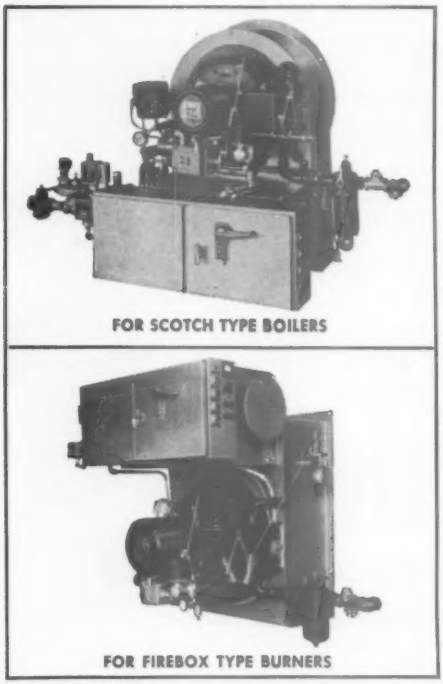
By-and-large bituminous coal (soft coal) costs less than anthracite (hard coal). For that reason, bituminous coal is used in many giant-size generating plants that produce electricity. It can be used in these enormous plants without the production of great amounts of chimney smoke. Fired by hand on the grates of a heating boiler, bituminous coal has a great tendency to produce troublesome amounts of chimney smoke. That's the main reason it is not used much in the northeastern states, for example, for heating large apartment houses, business buildings, and schools . . . even though its use in these large buildings might lead to pleasingly low fuel bills compared to those which result from using anthracite.

The situation boils down to this. In the northeastern states, some of the large and old-fashioned buildings still are being heated by anthracite, or hard coal, fired by hand on grates. The owners of these buildings would like to switch to bituminous coal, or soft coal, because the switch would reduce fuel bills considerably. But the switch to the much less expensive coal is not feasible because the use of this coal (soft coal) would lead to intolerable amounts of chimney smoke.

As coal goes, anthracite (hard coal) is an expensive fuel compared to bituminous coal (soft coal)—in the many cities in which both types of coal are sold and used. However, anthracite has the great advantage of burning without producing any chimney smoke.

One factor to be wary of, in considering the possibility of using anthracite to heat a school, is the ability of this hard coal to produce poisonous carbon monoxide. It can do this without giving warning; carbon monoxide, which is invisible and odorless, can bring death to building occupants though in the air only in small traces.

To guard against the production of this deadly gas in a boiler room and its spread through a building, the boiler using anthracite should be kept in excellent condition, the chimney draft should be adequate and should be con-



FOR SCOTCH TYPE BOILERS

FOR FIREBOX TYPE BURNERS

For Smooth, Efficient Combustion regardless of Stack Conditions and Firebox Pressures!

JOHNSON

FORCED DRAFT *Package-Unit* BURNERS

These quiet, smooth-running compact units come to you completely assembled, tested and wired at the factory . . . ready for easy, inexpensive attachment to any boiler or heat receiver. They give you top performance and minimum fuel costs on any heavy-duty heating installation.

They are built for firing on Oil Only . . . Gas Only . . . and for Combination Oil or Gas Firing. And they are available for either Scotch Type or Firebox Type Boilers as illustrated here.

These efficient units are powered by the time-tested, world-famous Johnson Model 53 Burners which *maintain a fixed air-fuel-ratio regardless of variations in oil temperature and viscosity.* Nine sizes are available ranging from 28 to 560 HP. Whatever your need, there's a Johnson Forced Draft Burner that will fill it efficiently.

Johnson Oil Burners

Builders of fine Oil Burner Equipment since 1903

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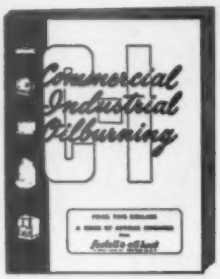
Edited For You—

THE COMMERCIAL INDUSTRIAL OILBURNING BOOK



Computing boiler load
•
Selecting burner size
•
Combustion volume
•
Boiler types
•
Firebox construction
•
Water tube boilers
•
Selection of burner
•
And other valuable information
•

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COMMERCIAL & INDUSTRIAL OILBURNING BOOK contains a series of articles of particular value to you, including 12 features by Kalman Steiner on the "Design of the Industrial Installation."

This series begins with a brief "Introduction to Industrial Oilburning" and then discusses in succession, computing boiler load and selecting burner size, combustion volume, boiler types, and firebox construction, water tube boilers, selection of burner and accessory equipment, boiler settings, function and operation of primary controls, other controls, function and application of fueloil preheaters.

An 80 page book, 8½ x 11 page size, profusely illustrated with photographs, charts and diagrams.

A reservoir of information you can use profitably and priced low enough so that each serviceman in your organization may have one as a ready reference book. $2.00 A COPY.

COMMERCIAL & INDUSTRIAL oilburning

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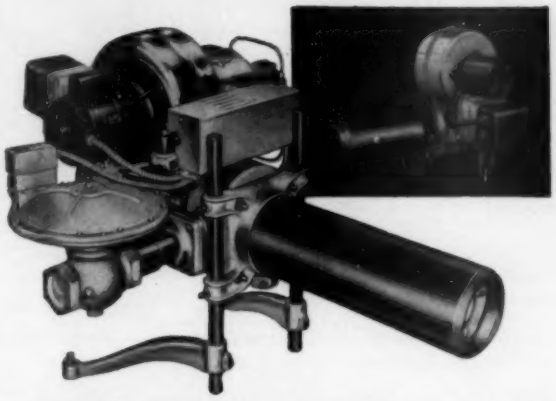

ESPECIALLY FOR YOU!

Fires two, three, and four-pass boilers, fire box boilers, water tube boilers,—direct fired stainless steel furnaces.

Sizes from 50,000 BTU to 8,000,000 BTU, for Gas or Oil or Combination Gas/Oil.

Flame retention through patented features eliminates pulsation

Low stack temperature, High CO_2

Solid, closely-knit fire

Two-stage fire with AUTOMATIC AIR control on both Gas & Oil

Flame safeguard with complete electronic programming, factory wired

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MANUFACTURERS OF OIL AND GAS AND OIL-GAS BURNERS

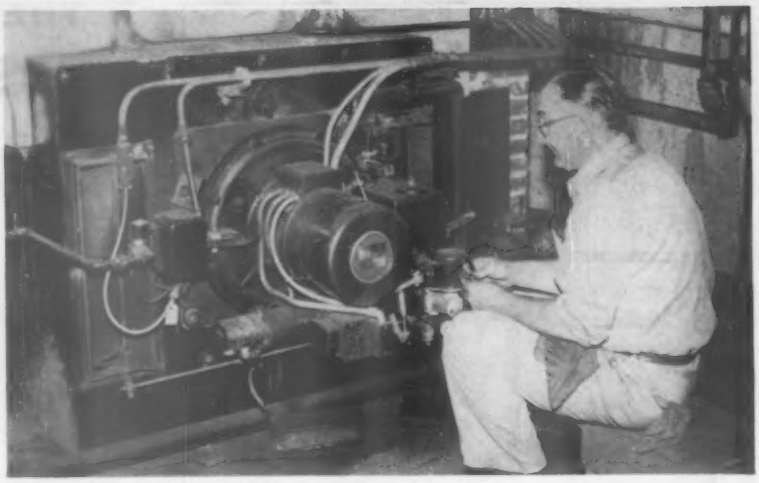
trolled properly by well-arranged smokepipe dampers that are used with intelligence, and correct methods should be used for firing the coal and admitting fresh air to the boiler room.

Fueloil has the invaluable advantage of not producing this poisonous gas, carbon monoxide. No occupant of a building ever was killed by "coal gas" or carbon monoxide produced by an oilburner!

The oil flame produced by an oilburner has an attribute of safety which is not found in coal firing. The release of heat from an oil flame can be stopped instantly, literally instantly, by the action of an electric control that finds the boiler steam-pressure threatening to become excessive. Or if the water-line of a steam boiler suddenly becomes so low as to endanger the boiler (a break in a return line, for example, lets all the water rush out of the boiler), the action of a low-water control will, again instantly, stop the oil flame and its output of heat.

Such safety, such instant response to control action, is not obtained with coal firing. No way exists to stop quickly the release of heat from a huge bed of coal that's burning fiercely within a boiler. That's true for stoker-fired coal and hand-fired coal.

Not related to safety, but related to convenience and to modern and desirable action, is the ease and speed with which oil flames can be started and quickly adjusted automatically to emit any desired amount of heat.



A stone-cold boiler equipped with an oilburner can be started up and put to work, though it has been idle for months, by the snap of a switch in an automatic control. Without a man in the boiler room to help it, the oilfired boiler starts automatically and produces its full quota of steam in minimum time.

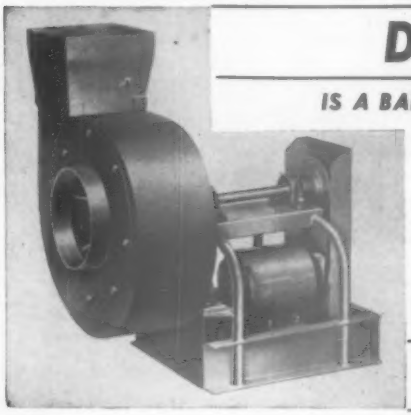
By comparison, the starting of a stone-cold boiler, which is fired by coal, is laborious—slow work that takes an hour, or even hours—and so old-fashioned in over-all as to be out of the realm of modern practice. Starting up a big, coal-fired boiler that heats a school is not a white-collar job!

Fuel storage problems are great with coal. Coal must be stored at a school in expensive basement or above-ground bins of great size. The value of its coal bins became clear to one institution when it decided to convert from coal to oil. Converting its large coal bins to badly needed laboratory and office rooms saved this institution hundreds of dollars per month—the rental value of the coal-bin space converted to useable rooms.

Fueloil can be stored in underground tanks, which are inexpensive compared to coal bins, and which can be located anywhere on the school grounds, even hundreds of feet from the school's boiler room.

Oil goes easily and swiftly, from one location to the other on school premises, through pipe lines. Simple electric pumps move the oil speedily and neatly. A pile of coal cannot easily be moved to another location!

The selection of the fuel comes first in planning proper heating of a school. Oil has such vast advantages over coal, as a fuel for a modern school, that the executives planning a new school simply cannot go wrong in deciding on oil heat. Oil heat is modern because among all fuels and forms of heating it stands out as safe to the ultimate degree, clean as can be, economical, and fully automatic.



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"114" Series Switch shuts off fuel if blower fails.

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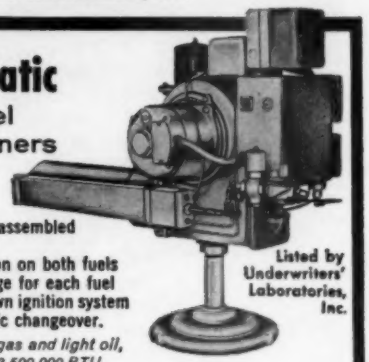
Dual Fuel
Gas-Oil Burners

With these outstanding features:

- Completely factory assembled and wired
- Balanced combustion on both fuels
- Automatic air change for each fuel
- Each fuel has its own ignition system
- Manual or automatic changeover.



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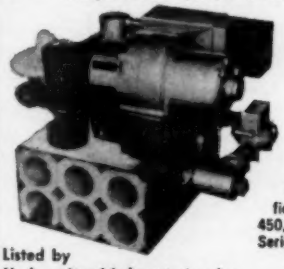
FGO *Six models for gas and light oil, in capacities to 3,500,000 BTU.*



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BFGG—For all gasses and Liquefied Petroleum. A complete line from 450,000 to 20,000,000 BTU. The BFGG Series incorporates many of the product features of the famous FGO Series.

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Write today for complete literature, information and specifications on POWER-FLAME'S Combi-Matic dual fuel burners. Also get the facts about THORO-MIX gas burners and POWER-FLAME gun type and spread type burners.

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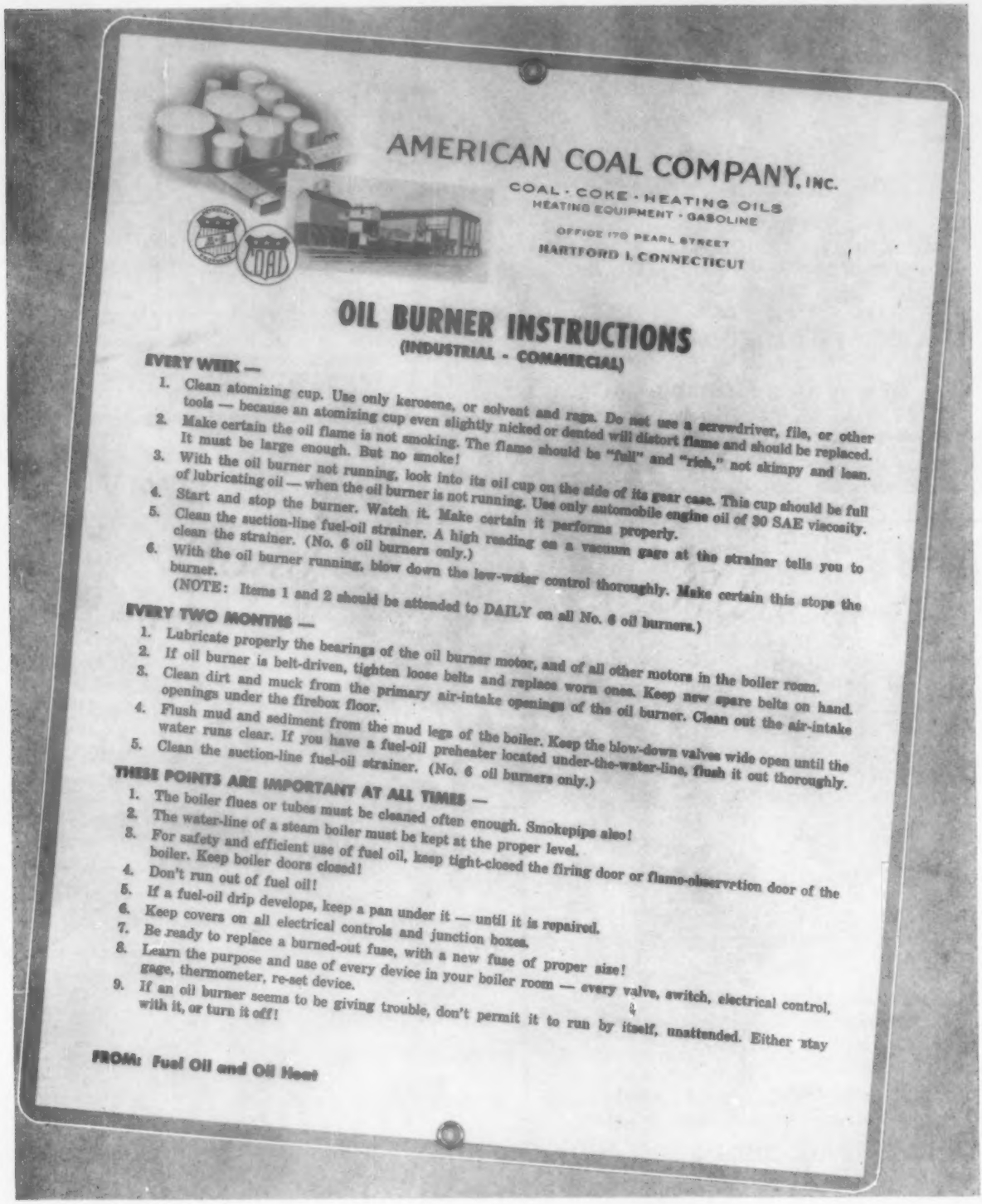
COMMERCIAL & INDUSTRIAL oilburning

The April 1959 issue of FUELOIL & OIL HEAT contained an article, "Instructions for Superintendents," outlining the service steps that normally should be taken by men in charge of commercial-industrial oilburning equipment. The American Coal Co., Inc., Hartford, Conn., took the instructions that were included with the article, had them set in type, printed on a company letterhead, coated with plastic and distributed the printed copies to superintendents in the area. The magazine was happy to permit American Coal to reprint this material and congratulates them on a very effective presentation. The superintendents now have not only a concise, helpful list of maintenance instructions, but they can't miss the company name and phone number at the top of the instruction sheet if they get in trouble and need more help.



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OIL BURNER INSTRUCTIONS

(INDUSTRIAL - COMMERCIAL)

EVERY WEEK —

1. Clean atomizing cup. Use only kerosene, or solvent and rags. Do not use a screwdriver, file, or other tools — because an atomizing cup even slightly nicked or dented will distort flame and should be replaced.
2. Make certain the oil flame is not smoking. The flame should be "full" and "rich," not skimpy and lean. It must be large enough. But no smoke!
3. With the oil burner not running, look into its oil cup on the side of its gear case. This cup should be full of lubricating oil — when the oil burner is not running. Use only automobile engine oil of 30 SAE viscosity.
4. Start and stop the burner. Watch it. Make certain it performs properly.
5. Clean the suction-line fuel-oil strainer. A high reading on a vacuum gage at the strainer tells you to clean the strainer. (No. 6 oil burners only.)
6. With the oil burner running, blow down the low-water control thoroughly. Make certain this stops the burner.

(NOTE: Items 1 and 2 should be attended to DAILY on all No. 6 oil burners.)

EVERY TWO MONTHS —

1. Lubricate properly the bearings of the oil burner motor, and of all other motors in the boiler room.
2. If oil burner is belt-driven, tighten loose belts and replace worn ones. Keep new spare belts on hand.
3. Clean dirt and muck from the primary air-intake openings of the oil burner. Clean out the air-intake openings under the firebox floor.
4. Flush mud and sediment from the mud legs of the boiler. Keep the blow-down valves wide open until the water runs clear. If you have a fuel-oil preheater located under-the-water-line, flush it out thoroughly.
5. Clean the suction-line fuel-oil strainer. (No. 6 oil burners only.)

THESE POINTS ARE IMPORTANT AT ALL TIMES —

1. The boiler flues or tubes must be cleaned often enough. Smokepipe also!
2. The water-line of a steam boiler must be kept at the proper level.
3. For safety and efficient use of fuel oil, keep tight-closed the firing door or flame-observation door of the boiler. Keep boiler doors closed!
4. Don't run out of fuel oil!
5. If a fuel-oil drip develops, keep a pan under it — until it is repaired.
6. Keep covers on all electrical controls and junction boxes.
7. Be ready to replace a burned-out fuse, with a new fuse of proper size!
8. Learn the purpose and use of every device in your boiler room — every valve, switch, electrical control, gage, thermometer, re-set device.
9. If an oil burner seems to be giving trouble, don't permit it to run by itself, unattended. Either stay with it, or turn it off!

FROM: Fuel Oil and Oil Heat

New PETRO oil fired water heater

HIGH RECOVERY RATE
Three sizes have recovery rate of 2.25, 3.33 and 4.5 gallons per minute. With 30 gallon tank capacity, this means these models can supply 55, 63 and 75 gallons of hot water in 10 minutes.

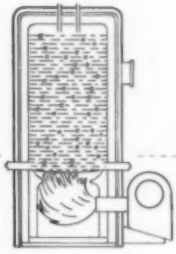
TUBELESS TANK—LARGEST HEATING SURFACE
Entire tank surface is a heating area—much larger than a fire tube tank.

5-YEAR UNCONDITIONAL WARRANTY ON TANK
Plus an additional five years on a prorated basis. Tubeless design eliminates cause of most tank maintenance.

GLASS LINED, WITH ANODE PROTECTION
Vitreous enamel lining provides clean, rust-free water and prevents corrosion of metal surfaces.

EXTREMELY EASY TO SERVICE
All burner parts are readily accessible. Divided cover permits access to heating surfaces without disturbing piping connections.

A COMPLETE PACKAGE, READY FOR SERVICE CONNECTIONS
Burner and controls are factory wired and tested, ready to be hooked up.



This advanced Petro water heater is well designed and well built. In performance it is economical and dependable. It can be sold in volume on a profitable basis. For more information on technical features and dealer opportunities, please mail coupon.

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fueloil & oilheat

Truck Talk

by Chet Cunningham

BEFORE LONG you will be able to buy a new type of tire for your fueloil trucks. They will be almost indestructible. You can shoot this tire with dum-dum bullets, chop a three or four inch chunk out of the tread, drill it with a half-inch auger and pound nails and spikes into it all day. Then you can get in and drive away without a worry and without any noticeable loss of stability or performance.

This tire is not filled with air, rather it uses "polyrubber" a flexible polyurethane material. This type of foam rubber filler can be bonded to the casing without using pressure equipment. It eliminates all types of flat tires and the filling doesn't fall out the holes. These tires are still experimental, but they will be on the market soon. It looks like soon now, flat tires will be nothing more than a bad memory.

Do you feel that you are getting enough miles per gallon out of your trucks? A lot of people say "no" and blame it on the carburetor jets.

Well, podner, it probably just isn't so. Few carburetor manufacturers will recommend changing jets to improve your fuel economy—unless they actually are the wrong sized jets in the first place. There are usually many other causes of poor fuel economy.

- Excessive fuel pump pressure is one common cause. A high fuel level may cause an over-rich mixture. The accelerating pump may be permitting pullover at high speeds due to a faulty check valve.
- Plugged idle or high speed jets, or even a sticky inlet needle can cause a high fuel level and your engine will flood at idle.
- If your butterfly choke valve is worn or set wrong, it will cause an overly rich fuel mixture—and waste gas or diesel.

One of the best ways to check is to idle the engine at various loads and then use a reliable combustion analyzer.

You might find most of your poor mileage story in your driver. Many leading experts say that a driver can mean as much as 20% difference in mileage from the same engine, same load and same route.

Very soon now your new trucks and cars will be vented to the front. General Motors is now on a crash research and development program to perfect front-mounted mufflers and exhaust discharge. They want to equip their 1960 models with this new feature.

At the present time only two states have laws which require discharge at the rear of cars and small trucks. These are being changed.

The new muffler and resonator up front will sharply reduce back pressure on the engine. This means more power from less fuel. Front mounting will mean less cost—no brackets and bolts and no long tailpipe out the back of the car to buy.

Future designers may put the muffler vertically in the front fenders. A short exhaust discharge tailpipe well forward and beneath the radiator will point down and rearward. The vertically-mounted mufflers will last longer, since the water and acids will drain away. Some think these new front mounted exhausts will be standard equipment by 1962.

Do you know that over 75% of night driving is done on low-beam headlights? Doesn't do much good to have four eyes on those new trucks, does it?

The headlight manufacturers thought the same thing, so they have come out with a new seven-inch headlamp. It's called the Type-Two and fits 90% of lamps now in use. It fits almost all except the new dual-lamps which are 5¾ inch.

This new lamp is designed for the concentrated traffic of today and gives you greater seeing distance on the low beam. It offers better light distribution, improved illumination of the right side of the roadway and deeper penetration of fog and rain. All of the headlight makers will switch to the new lamp.

The Timken service clinic says that when you clean wheel bearings the old grease can best be removed from the parts with kerosene or diesel fuel and a stiff brush. Gasoline and heated solvents are not recommended.

Steam cleaning should especially be avoided. The clean parts and mechanics hands should be thoroughly dried with absorbent cloth or paper. That's because new grease won't stick to surfaces wet with solvent. After drying, inspect the parts for damage.

Safety rules are important for drivers on the routes, but rules are also important around your shop. One list looks like this:

- Always think safety.
- Use safety jacks when truck wheels are off the floor.
- When moving a truck in your shop have someone walk directly in front or in back of the moving truck.
- Use goggles whenever welding, grinding, buffing, working under truck chassis or in dusty operations.
- Use caution when welding. Don't weld near oil or any inflammable material. Don't weld on or near gas tanks. Keep fire extinguisher handy.
- Replace all heavy tools in proper place immediately after use.
- Put creepers back in place after use.
- Clean floor, tools, work area, supplies after job, or at end of day.
- Keep work bench clean of cans, trash, broken parts.
- Wipe off truck door handles, steering wheel after working on rig. Clean out cab of truck removing worn parts, trash, wrenches, etc.
- Put worn-out parts, trash in designated container.
- Report all broken or damaged tools to foreman so they can be repaired or replaced.
- Use delicate tools and instruments only if authorized.
- After using fire extinguisher, recharge it and replace in regular position—ready for use.

(*Please turn to page 158*)

COMPACT N Model MACKS for modern fuel handling

New Mack Model N COE's combine outstanding reliability—a must where home fuel oil deliveries are concerned—with every feature needed for economy, bonus payloads and fast action in and out of congested areas.

Here's a truck specially designed to handle your kind of work . . . to give unmatched performance and traditional Mack reliability throughout its fantastically long prime of life. Here's a truck whose styling helps build your business prestige wherever it's seen . . . that's packed with features that make it the choice of dollar-conscious fuel oil dealers throughout the nation.

Only the Mack Model N COE's give you all these job-tested features: Choice of Mack engines—gasoline, diesel or turbocharged diesel—from 150 to 205 hp... Mack-built cab with tilt-cab action for full engine accessibility . . . truck and tractor models...low step height for easy entry-exit—flat cab floor available on models where both right and left side entry is desirable . . . panoramic, wrap-around windshields . . . advanced Mack steering systems for utmost maneuverability . . . air-boosted hydraulic clutch . . . choice of Mack transmissions, brakes, frames and suspensions . . . 4- or 6-wheel models with option of famous Mack Balanced Bogie.

For the names of firms that are already cashing in on the advanced profit-power Mack Model N's, contact your Mack branch or distributor. Mack Trucks, Inc., Plainfield, N. J. In Canada: Mack Trucks of Canada, Ltd., Toronto, Ontario.

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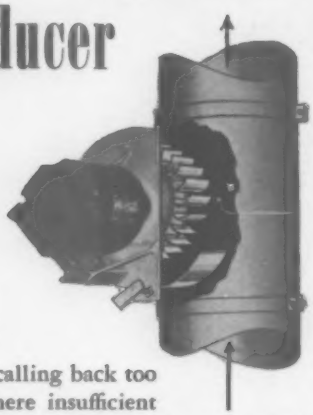

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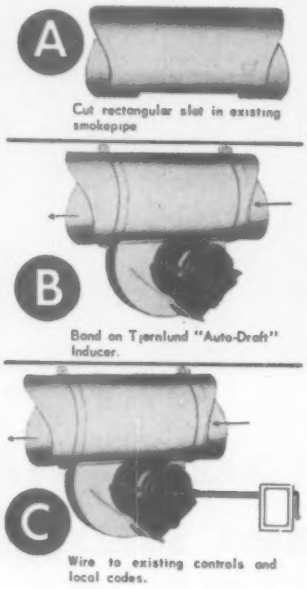
CHANCES ARE, you're calling back too often on certain jobs where insufficient and unstable draft is causing smoke, noisy starts, and basement sooting. You'll completely eliminate these unnecessary service calls, and make additional profits, when you *Guarantee Draft with "Auto-Draft".*

Simple as A-B-C to Install!



Only TJERNLUND has all these Features:

- Heavy Duty construction.
- Nationally known motor.
- Light weight.
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- Built for years of service.
- Venturi-type operation.
- Doesn't rob furnace room of combustion air.
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At your Jobber, or Write:

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NEW PRODUCTS

Degree-Day Systems Instrument is all-weather recording Thermometer

DEGREE-DAY SYSTEMS has made available an instrument which records outdoor temperature on an indoor chart to provide a permanent record of high and low readings.

The drum which holds the recording chart is not in continuous motion, but moves only once a day and then just far enough to place the next day's date line under the pen point. During this 24-hour period the pen moves over the chart in a vertical direction, indicating minimum and maximum temperatures. The temperature at the "step-over" time also is recorded.

The record traced on the chart—which revolves a complete turn in six months—provides a permanent log, indicates weather trends and provides the basic data on which degree-day systems are established. Available for $59.50, the instrument includes 8 ft. of armored liquid filled tubing to connect the outdoor temperature sensing bulb to the Bourdon spring and pen arm. Boxed with six charts, ink and instructions.

Made by: Degree-Day Systems, Inc., 39-30—58th St., Woodside 77, N. Y.

Dry tape Material "dopes" pipe Threads; comes in ½" Size on Tape 300" long

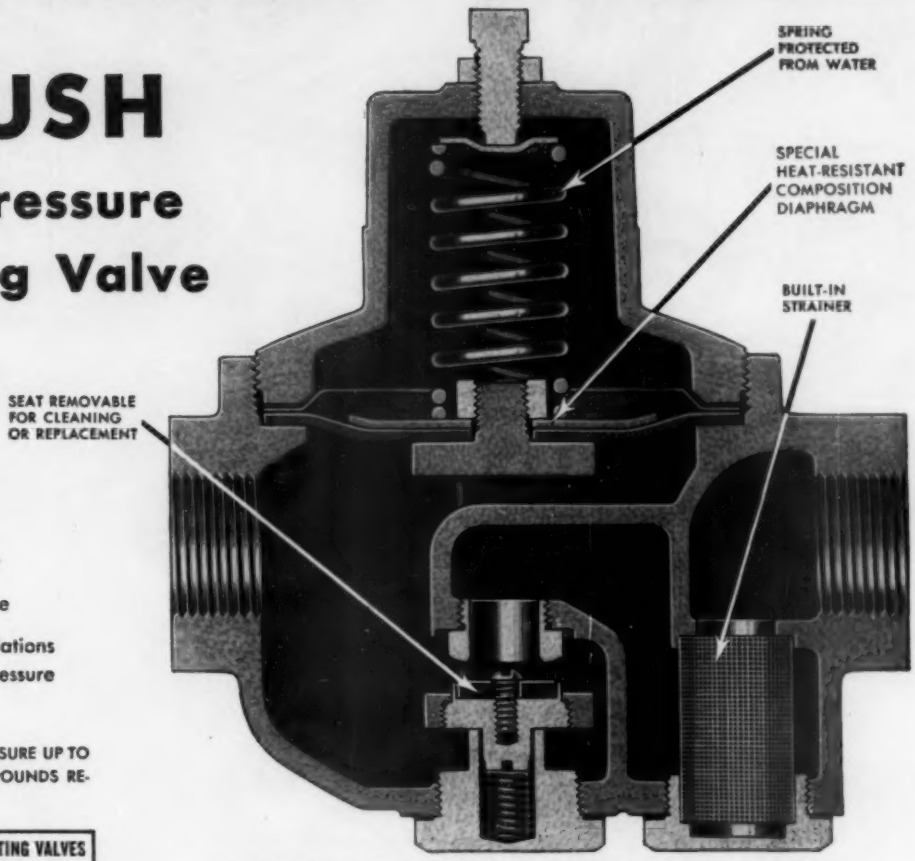
A DRY TAPE MATERIAL now is offered for "doping" pipe threads, known as Dri-Seal No. 5; furnished in ½" tape width with 300" of tape on each roll, enough to "dope" 120 joints of 1" pipe.

One full turn of the tape around the thread with a small overlap at each end provides effective sealing. The ends of Dri-Seal No. 5 are pressed into the threads as the two sections are made up. The tape is chemically inert, non-toxic, cannot contaminate liquids and is made of DuPont's Teflon.

Made by: Chemtrol, 10872 Stanford Ave., Lynwood, Calif.

Your Opportunity for
GREATER SALES

THRUSH
Water Pressure Regulating Valve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SPECIAL HEAT-RESISTANT COMPOSITION DIAPHRAGM
BUILT-IN STRAINER
SEAT REMOVABLE FOR CLEANING OR REPLACEMENT

1. Protects Fixtures
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3. Provides Correct Pressure
4. Large Dishwasher Installations need a Thrush Water Pressure Regulating Valve

OPERATE WITH INCOMING PRESSURE UP TO 250 POUNDS AND UP TO 100 POUNDS REDUCED PRESSURE.

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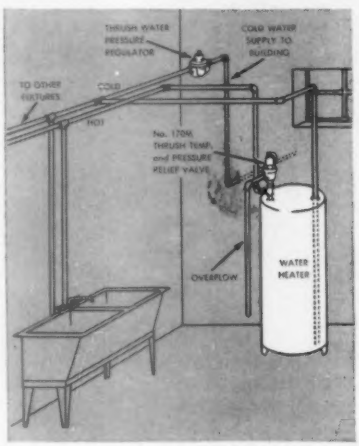
NO.	SIZE CONNS.	MADE OF	WEIGHT
20	½"	Brass	3¾ lbs.
50	¾"	Iron	4¾ lbs.
60	¾"	Brass	4¼ lbs.
70	1"	Brass	5½ lbs.



COMPLETELY REDESIGNED

AS MUNICIPAL water lines are extended to new housing developments and main pressures are raised, the Thrush Water Pressure Regulator becomes a "*must*" to protect fixtures from damage and to eliminate objectionable "hammer." Recommend and install them now for greater profit.

Improve large dishwasher machine operation by controlling rinse spray pressure. High or fluctuating inlet pressures are automatically controlled to give constant delivery pressure.

See your wholesaler today or write Department C-9 for literature and prices.

QUALITY HYDRONIC SPECIALTIES

H. A. THRUSH & COMPANY

PERU • INDIANA

On "Old Ironsides," the U.S.S. Constitution, Waldo White reaches for a belaying pin. The famed frigate of the War of 1812 is open to the public in the Boston Navy Yard.

Behind Old North Church, on Revere Mall, stands this famous bronze statue of the great patriot. Waldo also visited Paul Revere's house.

Waldo sees the Old North Church where lanterns—"one if by land, two if by sea"—signalled Paul Revere to start his famous midnight ride.

His Future Certain... Solar Heat Dealer Studies the Past

Sees Colonial Boston during local oil heat convention

WALDO WHITE sells a lot of Gulf Solar Heat around Gardiner, Maine. But he always manages to find time to learn more about early American history. It's his favorite pastime.

"My customers need heat nine months every year," says Waldo White. "But because I sell Gulf Solar Heat, I have plenty of time to pursue my hobby. Solar Heat is hydrogen-purified to burn cleaner. That's why I don't have many time-consuming service calls any more."

Waldo started working for the Gardiner Coal & Supply Company as an employee right after World War II. Now he's part owner.

At first he sold a competitive brand of heating oil. But for the past five, long, cold Maine winters he has been selling Gulf Solar Heat.

He knows the fuel business from every angle and Waldo's *plenty* sold on Gulf Solar Heat. His customers are, too!

• • •

Waldo White praises the hydrogen-purification process that enables Solar Heat to burn exceptionally clean. And—like all Gulf Solar Heat dealers everywhere—he knows from experience that cleaner burning heating oil means fewer service calls and "call backs."

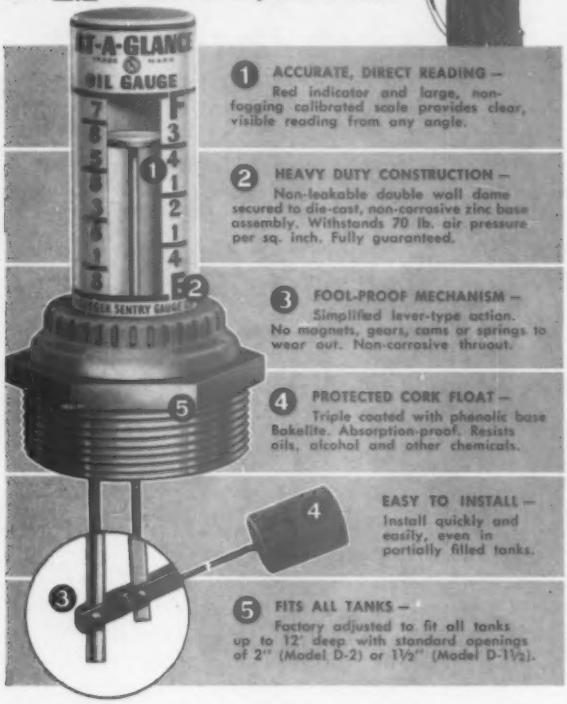
Profits are bigger because service calls are fewer—they're cut to the bone by hydrogen-purified Gulfined Solar Heat.

Why not phone your nearest Gulf office and get the *full* story on new Gulf Solar Heat. Also learn the many other sales advantages you can enjoy as a Solar Heat brand reseller. *Do it today!*

Of course, Waldo White visited the oil heat convention, too. To prove it, here he is with Rene Beauregarde, Solar Heat Marketer for Gulf's Boston Division.

Go one better
—Go Gulf
GULF
SOLAR HEAT
heating oil
OIL HEAT'S BEST

Here's why *Sentry*
AT-A-GLANCE
TANK GAUGES
are tops in sales and performance



1 ACCURATE, DIRECT READING — Red indicator and large, non-fogging calibrated scale provides clear, visible reading from any angle.

2 HEAVY DUTY CONSTRUCTION — Non-leakable double wall dome secured to die-cast, non-corrosive zinc base assembly. Withstands 70 lb. air pressure per sq. inch. Fully guaranteed.

3 FOOL-PROOF MECHANISM — Simplified lever-type action. No magnets, gears, cams or springs to wear out. Non-corrosive throuout.

4 PROTECTED CORK FLOAT — Triple coated with phenolic base Bakelite. Absorption-proof. Resists oils, alcohol and other chemicals.

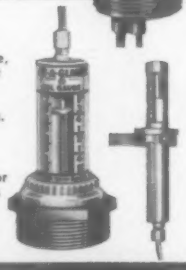
EASY TO INSTALL — Install quickly and easily, even in partially filled tanks.

5 FITS ALL TANKS — Factory adjusted to fit all tanks up to 12' deep with standard openings of 2" (Model D-2) or 1½" (Model D-1½).

Fastest selling in the industry, Sentry AT-A-GLANCE gauges are recognized for their superior qualities of accurate measuring, clear visible reading, rugged but simplified construction and long-life durability. They are fully guaranteed and "listed as standard" by Underwriter's Laboratories. Complete Literature, Sales Brochures and Counter Displays available.

SENTRY Superior Quality THERMA-GAUGE
Similar to the standard AT-A-GLANCE gauge above, but features a solid red thermometer type indicator and a two-piece die cast plug-nut assembly which permits simplified tank installation.

STOVE AND SPACE HEATER GAUGES
Several models with accurate, easy-to-read indicators to fit all tanks. Also models for small tanks such as power mowers and outboard motors.

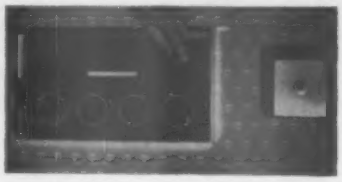


REMOTE READING TANK GAUGES
Several models for outdoor reading of levels in tanks indoors, underground or at delivery fill pipe.

KRUEGER *Sentry* GAUGES
GREEN BAY • WISCONSIN

Honeywell announces weather Station; affords Homeowner full comfort Control

HONEYWELL'S Weather Station control system gives the homeowner complete control over comfort and provides him with outdoor weather information. The panel contains all dials and buttons to control a year-round airconditioning system, as well as indicators for indoor temperature and humidity, outdoor temperature, barometric pressure and an electric clock. Specially-designed thermostat, which has no external temperature setting dial, is located away from the panel.



The Weather Station measures 7⅝" by 14", recesses between studs on an inside wall. All wiring is low-voltage, connected to accessible terminals in the panel case. Front portion is hinged. The electric clock provides automatic night-time set-back of temperature (a fixed 5 degrees) and morning pick-up. A special switch permits maintenance of daytime temperatures as long as desired. Alarm lights indicate clogged filter, reset compressor or reset oil-burner. Models are available providing automatic or semi-automatic changeover from heating to cooling.

Made by: Minneapolis-Honeywell Regulator Co., Minneaolis 8, Minn.

Granberg new fast flow truck Meter with rated Capacities up to 600 gpm

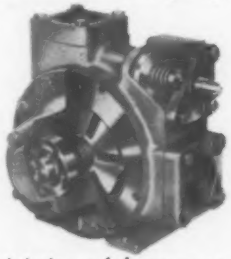
GRANBERG TYPE K truck meters were developed to accommodate increased delivery speeds and larger truck sizes.

They are available in sizes of 1¼" to 6" with rated capacities from 40 gpm up to 600 gpm. The meters employ non-pulsating five-blade rotors, described as maintaining accuracy at all viscosities.

Made by: Granberg Corp., 1308—67th St., Oakland 8, Calif.

Williams & Hussey introduces a larger Maxiflo truck Pump

INTRODUCTION of a larger W & H Maxiflo truck pump is designed to meet the demand for faster fills. The new pump, Model T-9125, is rated at 125 gpm with 2½" flanged connections. It has six non-metallic, self-adjusting, sliding vanes and is of the rotary, positive-displacement type.



It features permanently-lubricated sealed anti-friction bearings, trouble-free mechanical seals, thrust collars to minimize end thrust wear.

Made by: Williams & Hussey Machine Corp., Clinton St., Milford, N. H.

ZONVALVE*

the zone control valve with

100% SHUT OFF

for positive temperature control!

Globe-type construction of Zonvalve guarantees complete shut-off on steam, hot and chilled water systems. This means positive temperature control, without heat waste.

Engineer-architects and heating men recognize the superiority of Zonvalve's design features. Self-aligning plug insures positive closure and eliminates jamming. Valve is powered by a heavy-duty motor, with pinion, gear and cam assembly—for extra-long life and silent, dependable operation. Zonvalve's "hand-size" compactness makes installation possible where space is limited. Zonvalve is the *only* valve that uses Teflon for a self-lubricating, permanent seal.

Zonvalve is competitively priced. Built to last a lifetime, *it is the only zone control valve with an unconditional written Five-Year Guarantee!*

Zonvalve is ideal for modernization and new construction, in residential, commercial and industrial zone heating. For the finest in zone control equipment—specify Zonvalve, install Zonvalve!

New color brochure contains layouts, applications, customer benefits, technical data and prices. Write for Brochure B-9.

ZONVALVE

* This Trade-Mark is registered by Heat-Timer Corp., manufacturers of heating controls and motorized valves since 1935. It is your guarantee of positive zone control.

ZONVALVE MODELS

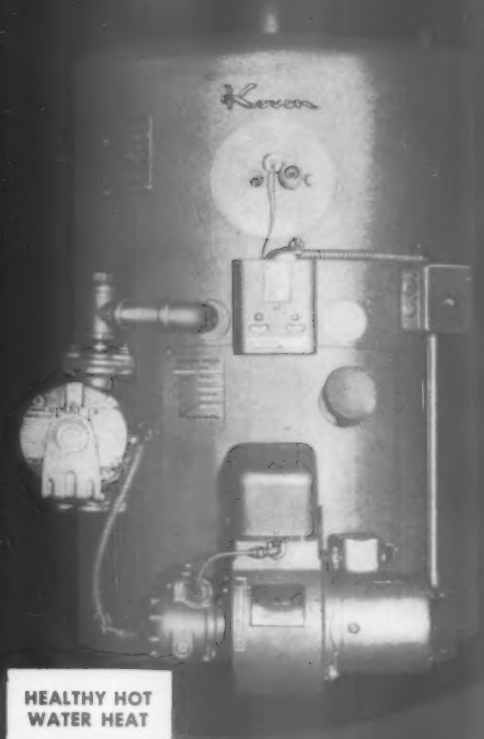
RS-A C-S S-S

AVAILABLE IN SIZES FROM ½" TO 1¼"

HEAT-TIMER CORP.
657 BROADWAY, NEW YORK 12, N.Y.

GAS or OIL FIRED
PACKAGED UNIT
A Space Saver...

and installation time saver



HEALTHY HOT WATER HEAT

COMPLETELY EQUIPPED FOR FAST INSTALLATIONS

- PLENTY OF HEAT AND HOT WATER
- FUEL-SAVER — economical to operate
- FULLY WIRED AND ASSEMBLED READY TO INSTALL IMMEDIATELY
- FITS THROUGH A 30-INCH DOOR in easy one-man handling crate
- BUILT TO FIT THE MODERN HOME

Nationally Advertised

L.O. KOVEN & BRO., INC.
RICHBOYNTON ROAD, DOVER, NEW JERSEY

Ray adds power pressure Burner for Use with Scotch Marine Boilers

AN INVERTED FORCED DRAFT power pressure burner announced by Ray has been designed for use with Scotch Marine boilers. The burners are available in oil, gas and combination units with capacity ranging from 7 to 30 gph for the oil models, gas capacity of 1 to 4.2 million Btu/hr.

All incorporate electronic safety and operating controls; low-fire start utilizes the Ray Modufire system in conjunction with variable flow nozzles. High-low fire operation is available with the addition of an extra limit control. High speed forced draft fan furnishes all air necessary for combustion against positive combustion chamber pressures.

Made by: Ray Oil Burner Co., 1301 San Jose Ave., San Francisco 12, Calif.

Vulcan interlocking, flush Enclosure eliminates the Use of Screws or Bolts

A PATENTED, interlocking, flush enclosure joint, Type H, eliminates the use of screws or bolts. Its features make the enclosure surface more attractive and speed installation.

Type H joint is so-called because of the design of the steel interlocking flanges that provide a tight seam along the entire joint. All Vulcan enclosures, except styles X and F, are available with the new joint.

Made by: Vulcan Radiator Co., 775 Capitol Ave., Hartford, Conn.

"I'd like some information on your all-weather installation."

this WALKER Automatic DRAFT REGULATORS Unit...

ENDS DRAFT PROBLEMS

*in gas, oil and solid-fuel installations**

THE INSIDE STORY OF SHUR-FLO EFFICIENCY

- Hi-Volume Self-Feathering Fan
- Self-Cleaning Blades (No Dust Build-up)
- Stainless Steel Shaft, Hub and Blades
- Quiet, Burn-Out Proof Motor
- Silicone Oiled Bearings
- Extra Rigid Mountings
- Extra Heavy Gauge Galv. Steel Construction.

"I don't fret with uncertain draft since Walker brought out this low-priced inducer-regulator. Now I install Walker inducers on all my jobs and have good draft right from the start!"

"Most Efficient Draft System Ever Made"

Say Heating Contractors, Architects, Home Owners

Draft problems end with Walker Shur-Flo (Pats. Pend.), SUREST DRAFT SYSTEM ever devised for oil, coal or gas-fired installations from older homes to modern, low-roofed houses. Install it, forget it! What could be better?

*** Free! "HOW TO CURE SICK CHIMNEYS"**

Now, the *first* ready-reference guide collecting *all* the information on Power Inducer Venting you'll need to solve your draft problems. You'll find it indispensable! Get your handy copy now! Absolutely no obligation.

WRITE TO US AT ADDRESS BELOW

Fan-operated draft-inducer draws *only* flue gases—*not* outside air. Quiet. Costs less to operate. Needs little power. Installs quickly at *any* angle. Virtually eliminates costly callbacks and corrections.

There's a Walker Draft Control for every draft problem regardless of fuel. 29,000,000 in use! The industry's standard of performance.

BALANCED 34 for larger special central heating

TYPE BB commercial and industrial control

ROYAL PURPLE for smaller central heating plants

JUNIOR LINE central heating budget control

DOUBLE SWING for gas-fired equipment

VENTURI CAP for heating and ventilating

See your supplier or write direct to

WALKER MFG. & SALES CORP. 1750 Penn St., St. Joseph, Mo.

Talking about firebox installation?

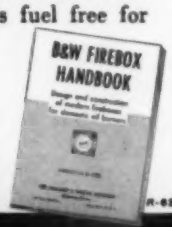
Explain that B&W IFB

also means better combustion In Fire Boxes

Whether you're quoting on new fireboxes or converting old ones, you can sell prospects faster by pointing out the advantages of B&W Insulating Firebrick.

B&W IFB heat up faster than ordinary firebrick, then confine the heat to the firebox. This results in higher firebox temperatures, more complete combustion. It's only logical that with better combustion, soot and odors will be materially reduced. B&W IFB also have excellent acoustic properties, assuring quieter operation.

Clinch the sale by explaining that lightweight B&W Insulating Firebrick save 20% in fuel bills. That means approximately 1 year's fuel free for every 5 years of operation.



A Valuable Guide for Every Installer

Send today for this Handbook!

R-628

THE BABCOCK & WILCOX CO.

Refractories Division

Works: Augusta, Ga.

General Offices: 161 East 42nd St., New York 17, N. Y.

TWO NEW OIL FURNACES

MODEL U-OB

MODEL CF-OB

NEW! UPFLOW MODEL U-OB

60" low x 20"-27" wide x 32½" deep

4 sizes: 84,000–95,000–112,000–140,000 Btuh

This brand-new oil-fired winter air conditioner is shipped completely factory-assembled and wired, with burner installed. Burner and controls are completely enclosed in an attractive cabinet that's so compact you can install it almost anywhere—basement, utility room, game room, hallway, alcove.

The small size is made possible by a new-type sectional heat exchanger that gives more heating surface in less space, extracts maximum heat—and gives *you* a strong fuel-economy sales story. Both the primary control—with flame-sensing device in the burner blast tube—and the fan-and-limit control are factory-connected to a single Central Control Station.

NEW! COUNTER-FLOW MODEL CF-OB

65" low x 20"-24" wide x 32½" deep

3 sizes: 84,000–95,000–112,000 Btuh

Here is the best-engineered counterflow unit made today.

For example, a new-type sectional heat exchanger provides maximum radiation surface in minimum space. The new Central Control Station handles *every* operation of the furnace automatically. The new primary safety control is factory-mounted right in the burner blast tube.

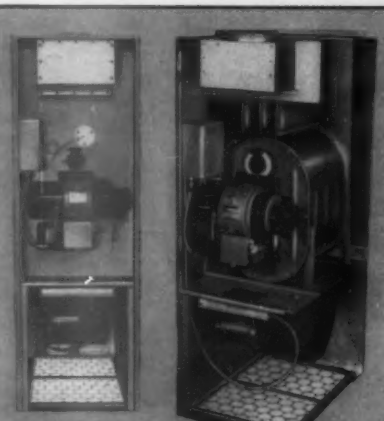
Both the U-OB and the CF-OB are equipped with the proven American-Standard "ACD" burner, which has earned a reputation among dealers as "the most reliable burner on the market." These two units are *all* you need to handle 95% of your oil-fired installations—basement, utility or counterflow. (If you need larger capacity, a two-furnace installation has definite advantages.) Units convert easily to gas . . . cooling is easily added. Get the spec sheets and the low competitive prices at your American-Standard distributor today.

AMERICAN-Standard

AIR CONDITIONING DIVISION

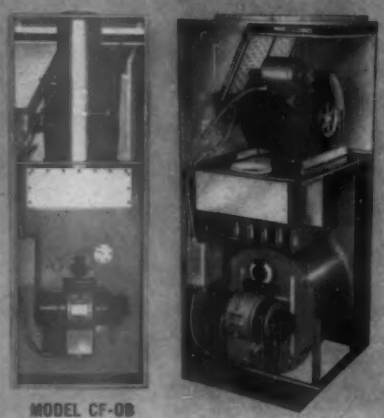
Elyria, Ohio

FROM AMERICAN-STANDARD



MODEL U-OB

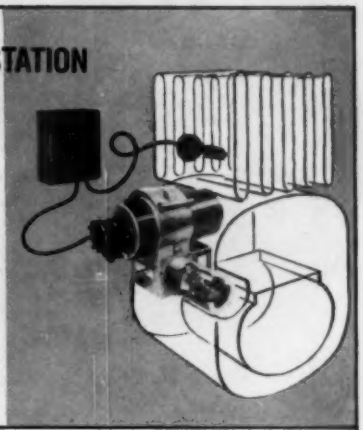
When the lift-off panels are removed from the furnaces (left), you can see how these units come from the factory fully assembled and pre-wired, with burner installed—ready to hook up and start up. The cutaway views (right) show the well-engineered compactness of these full-capacity units. Note the built-in filter frames on both units.



MODEL CF-OB

NEW CENTRAL CONTROL STATION

In these new units, the primary combustion control and the fan-and-limit control are factory-connected to a Central Control Station. Both controls are "fail-safe" type for complete safety. If the burner fails to ignite, the Combustion Thermostat in the blast tube of the burner signals the Central Control Station, and the burner is instantly turned off. The fan-and-limit control uses a new-type capillary tube sensing device that gives faster, more accurate and safer response.

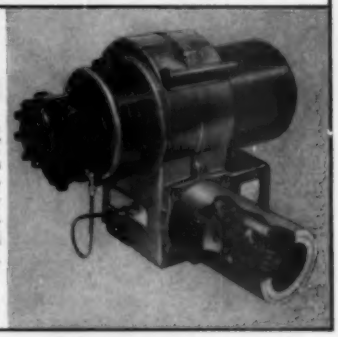


NEW HEAT EXCHANGER

The new, more compact multi-section heat exchanger has amazingly large heating surface for maximum heat transfer . . . occupies much less space than drum-type heat exchangers. And dealers who've seen these units are really impressed with the low draft loss through this new heat exchanger—which assures outstanding operation.

FACTORY-INSTALLED AMERICAN-STANDARD "ACD" BURNER

The "ACD" burner is hanger-mounted and fully insulated from the furnace. Tens of thousands are now in service—and dealers report it's the most reliable burner they've ever handled. Removable inner assembly and snap-in electrodes pull out without removing the burner. Electrodes, motor, fuel pump and transformer are standard parts, available anywhere.



MODEL	RATINGS			DIMENSIONS		
	Btuh capacity at bonnet	cfm rating	actual firing rate (gph)	height	width	depth
UTILITY						
U-84-OB ▲	84,000	905	.75	60	20	32½
U-95-OB	95,000	1025	.85	60	20	32½
U-112-OB	112,000	1205	1.00	60	24	32½
U-140-OB	140,000	1510	1.25	60	27	32½
COUNTERFLOW						
CF-84-OB ▲	84,000	905	.75	65	20	32½
CF-95-OB	95,000	1025	.85	65	20	32½
CF-112-OB	112,000	1205	1.00	65	24	32½

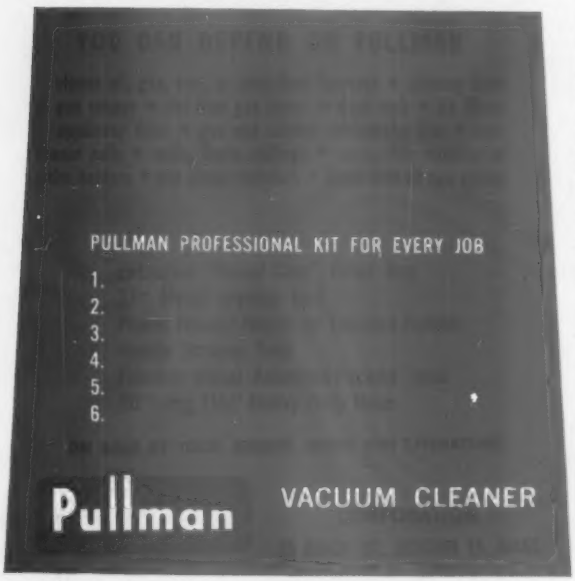
▲ These models also available with direct-drive blower

AMERICAN-STANDARD
AIR CONDITIONING DIVISION

American-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation

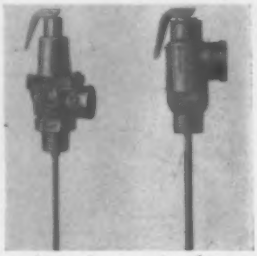
fuel oil & oilheat

THE WORLD'S LEADING FURNACE CLEANER



Watts announces two relief Valves which meet new FHA Requirements

WATTS REGULATOR has introduced two new temperature and pressure relief valves which conform to the new 1959 FHA Minimum Property Requirements. They are the No. 40XL and the No. 4XL self-closing temperature and pressure relief valves. Both have been tested and rated under American Standrad ASA Z21.22-1958.

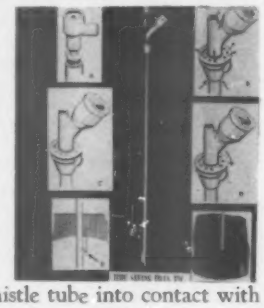


Watts is offering a packaged kit containing brochures on the valves and information about the new FHA requirements.

Made by: Watts Regulator Co., Lawrence, Mass.

Time Saving Fills adds Device for underground tank Deliveries

A FILL TUBE for use in deliveries of fueloil to underground tanks has been introduced by Time Saving Fills, described as permitting venting even where the regular vent is completely closed.



It is dropped into the fill pipe without the need for checking measurements to determine the depth of the tank. Once it is lowered, the signal head of the fill tube is turned and raised to ear level. This places the lower end of the whistle tube into contact with the inside top of the tank and anchors the tube. Collar of the tube may be raised or lowered by a simple thumb release. Made of non-ferrous metal; weighs less than 6 lbs.; standard length is 48".

Made by: Time Saving Fills, Inc., 140 W. Market St., York, Pa.

Econo Products zone control Valve is low-voltage, heating-cooling Unit

ZONE-A-TROL heating-cooling by-pass valve installs on the supply piping of each heating-cooling fan coil unit to provide individual room control for all such hydronic systems.

Designed for operation at pressures up to 250 lbs., the valve automatically controls flow into the unit as called for by a thermostat. On heating or cooling cycle the valve opens to demand position and directs full flow of water; when the thermostat is satisfied, the valve rotates to by-pass position.

Made by: Econo Products Co., East Haddam, Conn.

STEP UP BOILER PROFITS

Sell the Most advanced line... Sell Crane Residential Boilers

Crane Sunnyday 15. Highly efficient, oil-fired boiler. Wet base construction, nine horizontal fire tubes... save up to 15% on fuel. Four sizes: 66,800 to 156,000 Btu net IBR rating.

Crane Sunnyday 5. Oil-fired boiler. Available in both steam and water. Wet base construction, vertical fire tubes and top smoke outlet. Six sizes: 70,500 to 219,000 Btu net IBR rating.

Commercial, Industrial Boilers. Adaptable to any fuel, convertible to any firing method! Crane commercial boilers are ideal for anything from large homes to department stores and giant hotels. Large-capacity boilers that may be used singly or in battery. From 168,400 to 1,823,000 Btu net IBR rating.

Crane Radiation. Every type for every installation. Crane Sunnybase panels, Sunnyray radiation and Compac radiators.

SEE YOUR CRANE REPRESENTATIVE TODAY FOR ALL YOUR HEATING NEEDS!

For a completely dependable installation, use CRANE QUALITY VALVES, FITTINGS, PIPE, TUBING AND CONTROLS.

STEP UP YOUR SALES WITH CRANE®

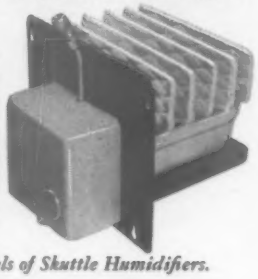
CRANE CO., 836 S. MICHIGAN AVE., CHICAGO 5, ILL.

3 GOOD REASONS

why Heating Dealers everywhere like to Sell Skuttle PRODUCTS

1. The only complete line of humidifiers for warm air heating systems
2. More profitable sales due to greater product demand
3. Superior quality construction

The New Skuttle Model 711 Counter-Balanced Humidifier



Here's a sure bet to increase your sales and profits. The new Skuttle Model 711 is installed in vertical plenums of any warm air heating system easily and quickly. There's no complex mechanism, operates with a single orifice. The Model 711 is shipped completely assembled for do-it-yourself installation if desired. Complete instructions and template included in package.

Write for further details on all models of Skuttle Humidifiers.

Skuttle Patented Vapoglas Plates

Millions of humidifier evaporating plates need replacing annually. Increase your profits by using Skuttle No. 489 Universal Vapoglas Plates, designed to fit all makes of humidifiers. Skuttle Vapoglas Plates have been satisfying customers for years. Get the best, install Skuttle Vapoglas Plates . . . copied but never equalled.

Skuttle-aire Electrostatic, Permanent, Washable, Lifetime Air Filters

Your customers will save; you will profit with Skuttle-Aire permanent, washable air filters for furnaces, central air conditioning systems and room coolers. Replacement costs are completely eliminated. Easy to install, easy to remove for cleaning. Skuttle-Aire light weight filters are available in all sizes. *And they never need oiling.*

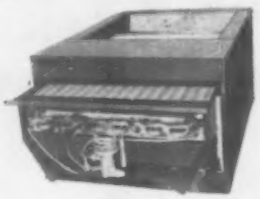
You can be sure your customers are getting maximum efficiency from any installation where Skuttle-Aire Electrostatic, Permanent, Washable, Lifetime Air Filters are used.

Skuttle MANUFACTURING CO.
MILFORD, MICHIGAN

IN CANADA: WAIT-SKUTTLE CO., OAKVILLE, ONT.

Olsen counterflow cooling Coils are available in two Capacities

OLSEN counterflow cooling coils, designed for installation beneath a counterflow forced-air furnace, are rated at 36,000 and 56,000 Btu/hr gross cooling capacity when installed with a 3 or 5 hp Luxaire air-cooled condensing unit, respectively.



They consist of a flat evaporator coil mounted horizontally and at a slight angle on a heavy steel frame. Suspended beneath the coil are a series of zinc-coated drainage trays. A heavy-gauge steel cabinet is offered as an accessory for slide-in installation. The cabinet not only provides support for the counterflow furnace under which it is located, but provides for the later addition of cooling if the furnace is installed initially without the cooling coil.

Made by: C. A. Olsen Mfg. Co., Elyria, Ohio.

Korth announces two water Softeners for domestic and small commercial Jobs

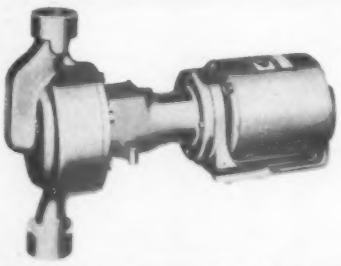
TWO MODELS of Korth automatic water softeners consist of automatic valves and timers, including automatic by-pass during regeneration. Salt and brine tank, which holds 200 lbs. of dry salt can be located separately from the softener tank; tanks are double-dipped galvanized. All valve parts are encased in heavy aluminum to prevent corrosion and can be installed inside or outside the home.

Model 51 will take care of the average home's requirements; Model 55 is designed for larger installations.

Made by: Eckhart Mfg. Co., Inc., P. O. Box 248, Union, N. J.

Taco Series of high head Circulators has six Sizes for flows up to 55 gpm

TACO'S new series of high head circulators is available in six sizes, with single or three-phase non-overloading features for heads to 45 ft. and flows to 55 gpm.



The units feature inline installation, cast-iron or bronze construction, closed impellers cast in one piece, stainless steel shafts. An angle base for base-mounting is optional and bronze-fitted models are available at no extra cost. Designed for heating and/or cooling, boosting water pressure and recirculating hot water.

Made by: Taco Heaters, Inc., 160 Cranston St., Cranston 9, R. I.

FIRST IN QUALITY,
PERFORMANCE, REPUTATION

Rochester Universal
FUEL OIL TANK GAUGE

Why take a chance on a top notch burner installation by gambling with an inferior fuel tank gauge?

Take a tip from successful installers who've used ROCHESTER Universal Gauges for years.

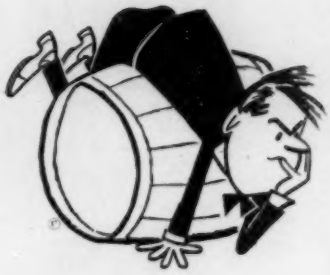
They know their customers stay sold when they know where they stand on fuel. It costs less, they say, to depend on a Rochester Gauge.

More ROCHESTER UNIVERSAL GAUGES are sold than any other kind!

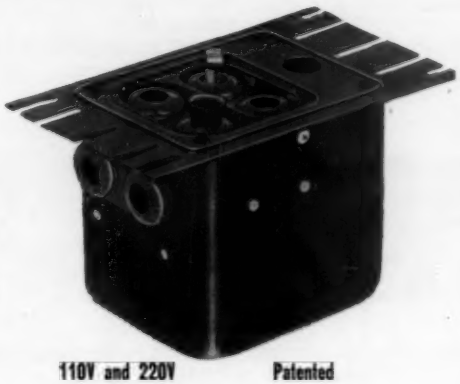
ROCHESTER MFG. CO.
8 Rockwood Street
Rochester 10, N. Y.

RMC
ROCHESTER MANUFACTURING CO.

Service Problems Got You?



THERMOLOK ADAPTO TRANSFORMER will fit 80% of the burners you service.



110V and 220V **Patented**

1. **UL Approved**
2. **3 sets of terminals**
3. **Takes standard Rajah Fittings**
4. **Only one service call necessary**

Ask your JOBBER to show you ADAPTO TRANSFORMER TODAY

THERMOLOK Manufacturing Co., Inc.
1099 Tulip Ave., Franklin Square
Long Island, New York

MORE B.T.U.
PER $

NEW IMPROVED MOUNTING — Element "floats" on saddles. No hooks.

LARGER FINS — FOLDED ENDS
Easier, safer to handle. Fins can't get bent . . . fingers won't get cut.

SPARTAN
BASEBOARD

Compact • Beautiful • Noiseless • Non-protruding • Always individually boxed, fully assembled • Saves 33% installation time • Available in 1, 2, 3, 4, 5, 6, 7, 8 ft. lengths

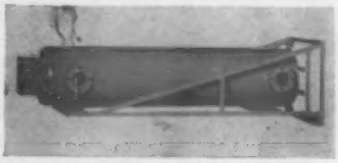
IMMEDIATE SHIPMENT
from
7 Strategically Situated Warehouses

Write for Illustrated Literature

SPARTAN
CONVECTOR CO., INC.
52-55 74th Street, Maspeth 78, N. Y.
ILlinois 7-5502

Vulcan Line of circulation Heaters can be used as fueloil Preheaters

VULCAN'S electric circulation (side-arm) heaters are designed for water, oil, steam and air, recommended for use as preheaters in fueloil lines, among other applications.



Tubular immersion heating elements can be supplied in copper, steel, stainless or alloy sheath, with specially-designed baffles to induce even flow. Housings are made of brass, galvanized iron or steel; each unit is fully insulated. Variety of sizes range from 5 kw to 120 kw, for voltages up to and including 550 volts.

Made by: Vulcan Electric Co., 88 Holten St., Danvers, Mass.

G-E transistorized Progress Line features high Power and small Size

TRANSISTORIZED two-way radio equipment announced by General Electric contains the highest powered transistorized models, smallest sizes and lowest battery drain.

The transistorized Progress Line will be available in units up to 75 watts and will range downward to 30 and 10 watt sizes as small as 8⅝" wide, 12" long and 4" high. The new line contains only three tubes in the lower wattages and four in the higher.

Made by: General Electric Co., Communication Products Dept., Lynchburg, Va.

Cash-Acme hot water tempering Valve is adjustable from 110° to 180° F.

CASH-ACME Tempo type TMA hot water tempering valve features a "dial easy" temperature adjustment on the top permitting setting of desired temperature without tools. The valve has an adjustment range from 110° to 180° F.

Made of rugged brass and stainless steel, the valve utilizes a hermetically - sealed thermostatic element with a positive action.

Currently offered in ½" size with all connections for sweat copper.

Made by: A. W. Cash Valve Mfg. Corp., Wabash and Morgan, Decatur, Ill.

QUAKER MAID REFUELER

MARTHA WASHINGTON

MARTHA WASHINGTON TANDEM

GONDOLA TYPE SEMI-TRAILER

Truck tanks

BY QUAKER

SOUND ENGINEERING AND LIGHTWEIGHT CONSTRUCTION ASSURE EXTRA PAYLOAD

CUSTOM REFUELER

Quaker Truck and Trailer Tanks are designed by engineers of highest standing and built to your individual requirements by mechanics of the finest skills. Before construction is started on any tank, a blueprint is submitted showing how the tank will look, how much it will weigh, and how the load will be distributed on each axle in accordance with both the chassis manufacturers' specifications and State highway laws. You can depend on Quaker Tanks never to be overweight, never to be over or under capacity; and to have the load distributed perfectly.

For over 30 years Quaker has been the leader in the development and improvement of truck and trailer tank equipment. Go over any modern piece of equipment and see what a large percentage of the improvements in design and construction have been developed by Quaker City. To take a specific item: you will find lightweight tubing of larger inside diameter than piping, with long sweep elbows replacing sharp mitered joints, all joints welded and tested. Features like these explain why so many large oil companies ask us to construct pilot models for them before they go ahead with a large program.

Get the benefit of standardization where it will save you time and money, but at the same time enjoy the advantages of a tank designed to fit your individual requirements by specifying Quaker City on your next order. Whether you want a simple job like our "William Penn" or a deluxe unit like our "Fawn," we can take care of your needs.

FAWN

WILLIAM PENN

QUAKER CITY IRON WORKS

3400 GAUL STREET, PHILADELPHIA 34, PA., Telephone: REgent 9-3000

ONE OF AMERICA'S LEADING TRUCK TANK BUILDERS FOR OVER 30 YEARS

Every Oil Heating System needs an

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Fuel Oil Filter

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PROTECTION

- All Wool Felt Cartridge with Staggered Fin Design provides maximum filtering surface. Traps moisture and impurities of microscopic size.
- One-Piece Bowl Construction eliminates connection leaks at bottom
- Hexagon Extensions for fast, easy installation at tank or burner
- Standard and King Sizes to handle every size oil heating system

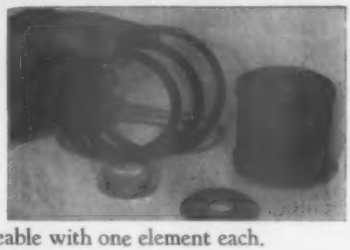
BEST FOR THE JOB, BEST FOR YOU

Super Design plus Competitive Price add up to Bigger Profits for You! Mail coupon below for the complete story.

AUTO-FLO CORPORATION
12085 Dixie Street, Detroit 39, Michigan
Please send me full information on:
☐ Auto-Flo Fuel Oil Filter ☐ Auto-Flo Automatic Humidifier
Name _____
Address _____
City _____ Zone _____ State _____

Purolator announces filter Refills for Use with 98% of all Oilburners

FOUR FILTER REFILLS, announced by Purolator, are described as usable with 98% of all oilburners. The PF-200 refill (illustrated) is interchangeable with 19 of 24 leading filter elements; PF-63 is interchangeable with three elements; PF-65 and PF-67 are interchangeable with one element each.



All elements are supplied with adapter rings and extensions and feature pleated filter elements made from resin-impregnated cellulose. Purolator has prepared a cross-reference chart to identify the four filter refills and the seven commercial filter models in which they can be used.

Made by: Purolator Products, Inc., Rahway, N. J.

Thrush Valve for zoned hot water Heat is operated with standard Controls

THE THRUSH zone valve for hot water heating systems is available in ¾" and 1" sizes, operates with standard thermostats and relays and can be soldered into the line without taking the valve apart.

Design features include tight closing and a visible wheel for opening and closing the valve manually, if necessary. The valve requires simplified piping and low voltage wiring and is equipped with closed contact switches. Can be installed in several different positions.

Made by: H. A. Thrush & Co., Peru, Ind.

Philadelphia Valve fueloil Nozzle features smooth Operation at 150 psi

A NOZZLE for fueloil deliveries, announced by Philadelphia Valve, features a smooth operating valve mechanism which opens or shuts easily with one finger, even at pumping pressures up to 150 psi.

The high capacity nozzle is made of aluminum, is surge-proof and non-leaking. Lightweight aluminum swivels with nylon bearings are available. Fueloil nozzles are offered in 1¼ or 1½ in. sizes with swivels for each. Simple adjustment of the rate of closing is provided by a needle valve, externally adjustable without removing the nozzle.

Made by: Philadelphia Valve Co., Aramingo Ave. & East Tioga St., Philadelphia, Pa.

Formula for Success

Retailers supplied by Met-Pet enjoy two distinct advantages:

1. Met-Pet resources assure a dependable supply of top quality fuels coupled with reserve tankage and rapid marine transport facilities to safeguard and expedite the constant flow of refined products.
2. With over 60 supply depots where Met-Pet fuels are available to the retailer, the resultant savings with shorter hauls, lower distribution costs, and prompt service, are clearly evident.

This ever-expanding pattern covering the New York Metropolitan market has proved itself to established customers through whose combined efforts Met-Pet offers prompt and efficient service. A telephone call to one of the main district plants will outline the additional advantages of joining this experienced team.

MET-PET CORP.

PITTSTON

"A MAJOR INDEPENDENT" Wholesale Only

METROPOLITAN PETROLEUM CORPORATION

Executive Office: 514 Kinderkamack Road, Oradell, N. J.
MUrray Hill 2-0667

fuel oil & oilheat

Quickdraft... THE WORLD'S SAFEST

POWER DRAFT UNIT FOR INDUSTRIAL, RESIDENTIAL AND INSTITUTIONAL EXHAUSTING

Increases heating and combustion efficiency!

Provides air power for bulk materials handling!

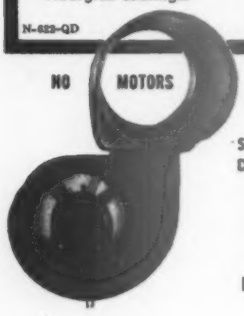
Exhausts corrosive gases and abrasives!

Quickdraft provides industry, commerce, institutions and homebuilders *power draft* engineered for economical and efficient combustion regardless of building or atmospheric conditions. Models suitable for every heating or incinerator application . . . eliminate pulsating or chattering, puffing, smoking and sooting. Reduce building costs, no tall, unsightly stacks required. Quickdraft also provides industry with ¼ inch to 60 inches W.G. static pressure for exhausting corrosive gases, abrasives and paint spray. Heavy-duty, high-pressure models, 6 inches to 30 inches diameter, are available for moving bulk materials or anything that can be moved by air. Because there are no motors, fans or bearings in exhaust line, only Quickdraft avoids costly clogging, corrosion of moving parts or fan failure.

IMPORTANT NOTICE

For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (P.V.C.) and with plastic and Fiberglas coatings.

N-823-QD



NO MOTORS FANS OR BEARINGS IN EXHAUST LINE

Send for QUICKDRAFT ENGINEERING DATA on your application . . . now.

Quickdraft CORPORATION

P.O. Box 87-F Canton 1, Ohio

Pullman boiler and furnace Vacuum equipped with 1½ hp, 3-stage Motor

PULLMAN JB365F, heavy-duty furnace and boiler vacuum cleaner, is equipped with a 1½ hp, 3-stage, self-cooling motor. Fully equipped with standard furnace kit, the new unit features convenience of interchangeable tools, accessories, motor heads and containers used on all Pullman units. Specifications: 115 volts, 60 cycles AC-DC, waterlift maximum 92"; height is 32¾", diameter, 16", 17 gal. capacity.

Made by: Pullman Vacuum Cleaner Corp., Dept. P, 25 Buick St., Boston 15, Mass.

Roberts-Gordon oilfired Boilers are cast-iron Units in nine Sizes

TWO LINES of oilfired boilers have been announced by Roberts-Gordon. Gordoneer Series GWO hot water boilers are available in four sizes from 111,000 to 180,000 Btu/hr output. The compact units measure 18½" wide, 44" high and depths from 16½" depending on number of sections.

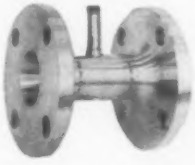
Gordoneer Series 2GO hot water and steam boilers are offered in five sizes from 113,000 to 252,000 Btu/hr.

Both series feature cast-iron sections, wet-base construction; tankless water heating coils are available. All boilers are I-B-R-rated and ASME-constructed.

Made by: Roberts-Gordon Appliance Corp., 44 Central Ave., Buffalo 6, N. Y.

Bowser Division offers Pottermeters for terminal or bulk plant Operations

TURBINE-TYPE Pottermeters can be incorporated into any remote control, remote reading or telemetering system for the handling of petroleum, including terminal and bulk plant operation.



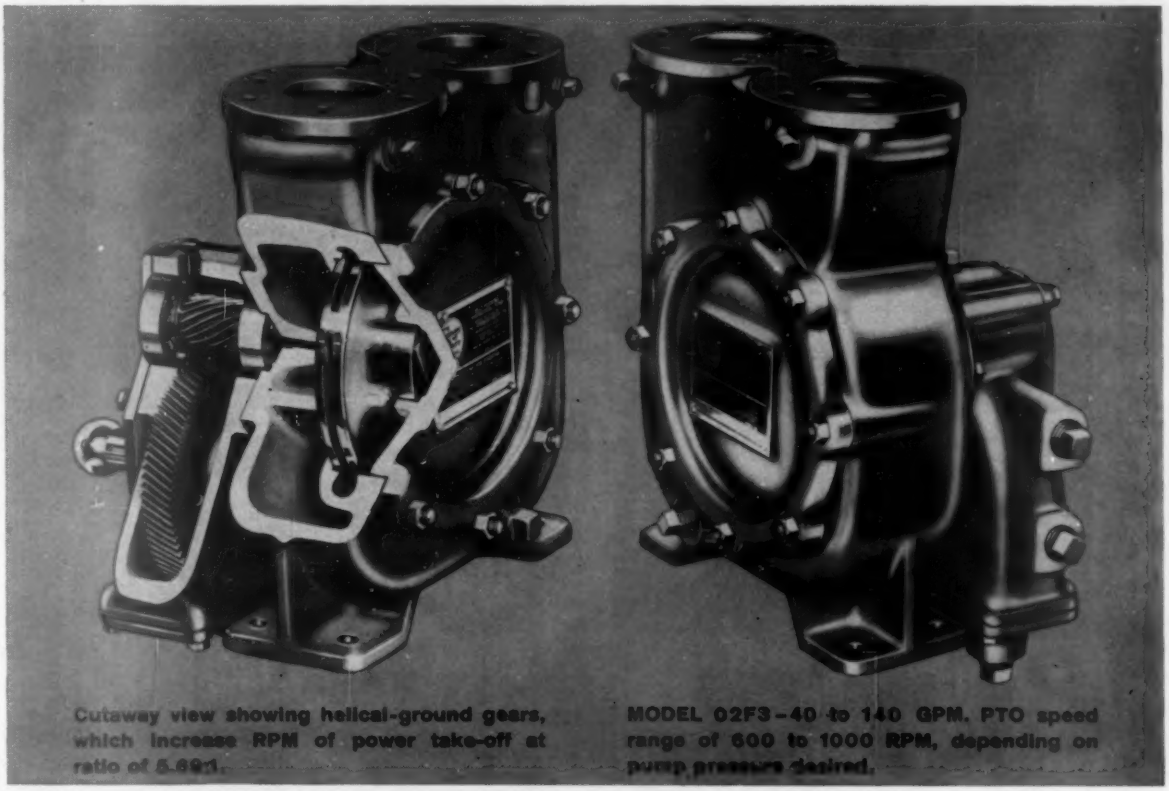
Pipe-mounting, straight-through Pottermeters incorporate a turbine-rotor which generates an electrical current of intensity directly proportional to the flow rate The current is transmitted to any type of electronic equipment required. Capacities from 0.1 to 40,000 gpm or more, with unlimited operating pressure.

Made by: Pottermeter-Bowser Div., Bowser, Inc., 1302 E. Creighton, Fort Wayne, Ind.

BY GORMAN-RUPP... A SINGLE PUMP TO MEET ALL FUEL DELIVERY NEEDS

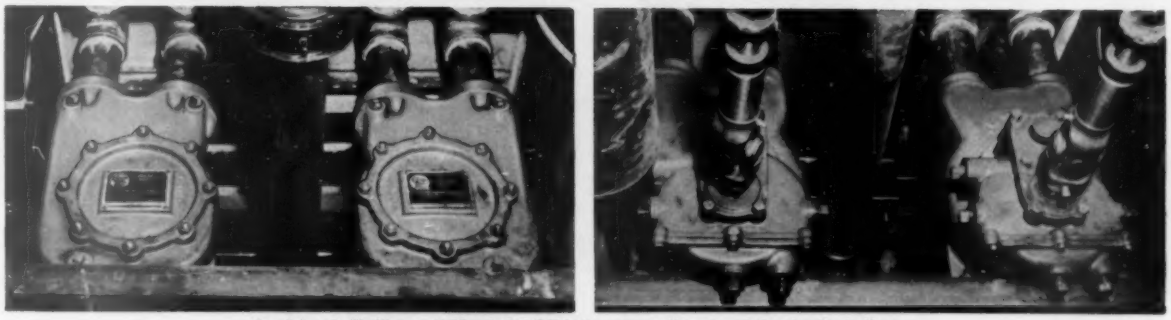
40 to 140 GPM, positive action, sure priming, trouble-free performance, no check valve—all in the new Gorman-Rupp 02F3 Pump. Here's the unit specifically designed for quick, efficient fuel oil deliveries. Time is money—so save time —see your Gorman-Rupp Dealer Today!

THE GORMAN-RUPP COMPANY
305 BOWMAN STREET • MANSFIELD, OHIO

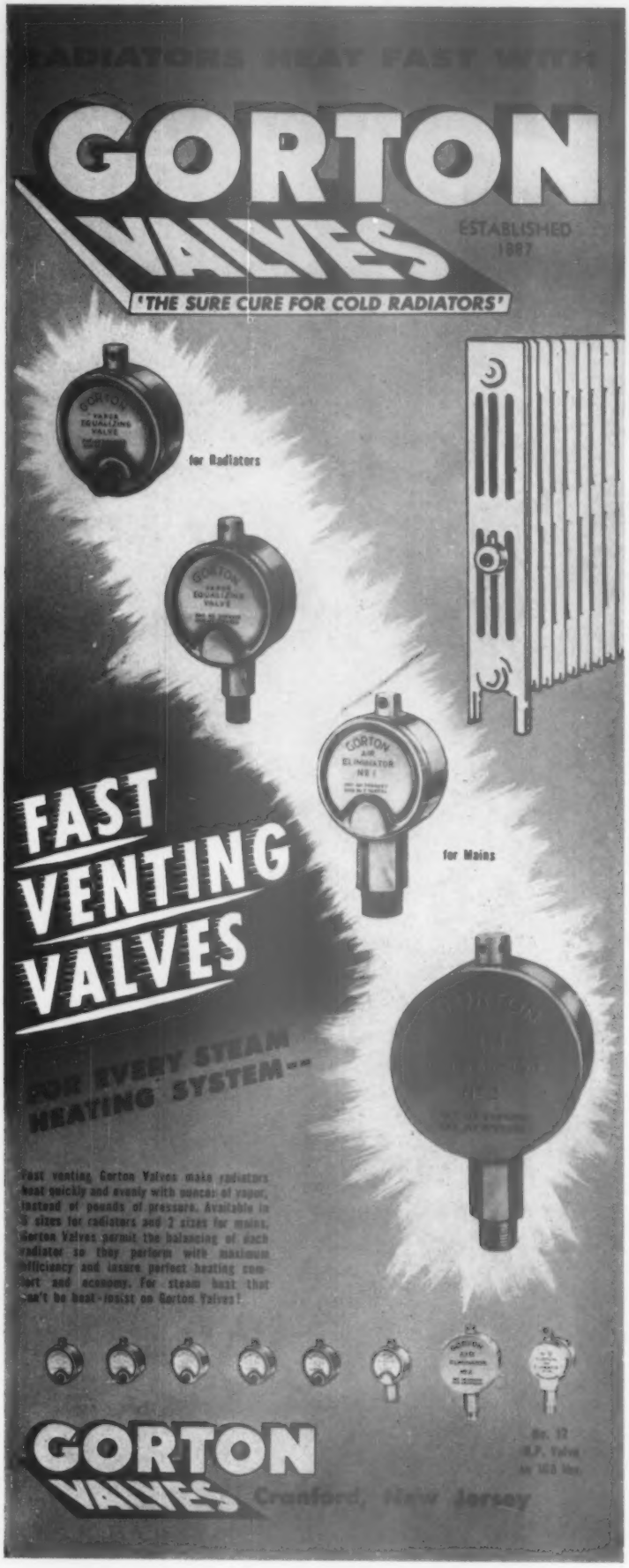


Cutaway view showing helical-ground gears, which increase RPM of power take-off at ratio of 5.69:1.

MODEL 02F3–40 to 140 GPM. PTO speed range of 600 to 1000 RPM, depending on pump pressure desired.



dual installation of Model 02F3 for gasoline and fuel oil delivery.



. . . . New Products

Majestic CK7 cleanout and combustion Kit is intended for use with Thulman Chimneys

CK7 COMBUSTION AND CLEANOUT KIT is an addition to the Majestic Thulman line of all-metal, prefabricated chimneys, designed to catch rainwater and other condensation at the bottom of the flue and eliminate rain baffles in the upper part of the chimney. Thus, it is possible to install an unobstructed smoke outlet at the top of the chimney.

Made by: The Majestic Co., Huntington, Ind.

Improved Weather-Flo outdoor Type reset building heat Controllers

AUTOMATIC DEVICES has announced a new line of low-cost outdoor reset type building heat controllers—improved Weather-Flo Regulators. Available in fixed or in adjustable ratio models.

In its basic form, Weather-Flo effects "on-off" switching action with 10 amps capacity at 115 or 230 volts. Modulating or proportioning types are available, as are two-temperature models.

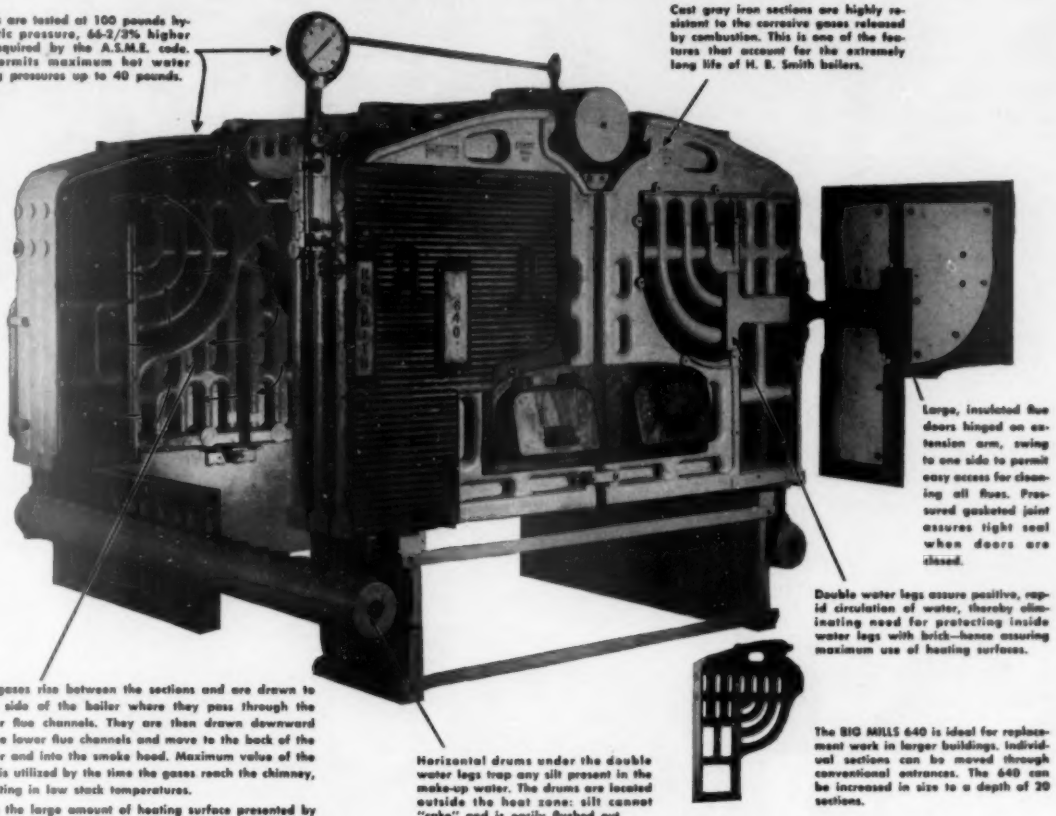
Made by: Automatic Devices Co., Inc., 714 Hillgrove Ave., Western Springs, Ill.

Newmack's "Moisture-Lite Indicator" glows to indicate relative Humidity

"MOISTURE-LITE INDICATOR" is a compact device, which plugs into an electric socket, and indicates the percentage of moisture in the air. The device incorporates an electronic sensing element which responds instantly to changes in air moisture. Relative humidity is indicated by a tiny electric lamp which glows faintly when relative humidity reaches 30%. The brightness increases as humidity rises.

Made by: Newmack Corp., 147 Eady Court, Elyria, Ohio.

H. B. Smith "BIG MILLS 640"
is the big news in heating boilers


Sections are tested at 100 pounds hydrostatic pressure, 66-2/3% higher than required by the A.S.M.E. code. This permits maximum hot water working pressures up to 40 pounds.
Cast gray iron sections are highly resistant to the corrosive gases released by combustion. This is one of the features that account for the extremely long life of H. B. Smith boilers.
Large, insulated flue doors hinged on extension arm, swing to one side to permit easy access for cleaning all flues. Pressured gasketed joint assures tight seal when doors are closed.
Double water legs assure positive, rapid circulation of water, thereby eliminating need for protecting inside water legs with brick—hence assuring maximum use of heating surfaces.
Hot gases rise between the sections and are drawn to each side of the boiler where they pass through the upper flue channels. They are then drawn downward to the lower flue channels and move to the back of the boiler and into the smoke hood. Maximum value of the fuel is utilized by the time the gases reach the chimney, resulting in low stack temperatures.
Note the large amount of heating surface presented by each section. This means rapid absorption of heat and fast steaming.
Horizontal drums under the double water legs trap any silt present in the make-up water. The drums are located outside the heat zone: silt cannot "cake" and is easily flushed out.
The BIG MILLS 640 is ideal for replacement work in larger buildings. Individual sections can be moved through conventional entrances. The 640 can be increased in size to a depth of 20 sections.

Meets demand in large institutional buildings

BIG MILLS 640 is the brand new cast iron water tube boiler of advanced design in the size range of 100 to 200 horsepower.

Based on the time-tested and proved Mills principles, it embodies refinements and improvements which place it far ahead of any boiler of comparable capacity — with the added advantages of long life and low operating cost.

The 640 is designed for efficient use with horizontal rotary oil burners or gas burners. All sizes operate with 55-foot chimneys with natural draft — lower chimneys than are required by any other boiler of its size — cast iron or steel.

Write for the new bulletin which illustrates and describes this boiler and gives complete engineering data.

H. B. Smith CAST IRON BOILERS

The H. B. Smith Company, Inc., Westfield, Massachusetts • Est. 185

Ardmore hydraulic dispensing Units are packaged for fueloil Delivery

ARDMORE hydraulic fuel dispensing units for fuel delivery trucks consist of all the equipment required for a product delivery system, including system drive motors, product pump, meter, strainer, control valves and hose reels. All components are matched to provide capacity flow and performance. Units are supplied in a complete range of product delivery sizes and are offered for both single and dual hose reel systems. The extremely compact units are delivered ready for installation in truck reel compartment; units may be transferred easily from one chassis to another.

All components in the system are positioned to be accessible for service from the rear of the truck—pump and meter strainers are easily removed for cleaning, rear cover of pump is removable to examine rotor without removing pump. Over-all dimensions of a unit with dual hose reels are 79" wide, 33" front to back, 34¼" from floor to top of hose roller and 30½" to top of reel.

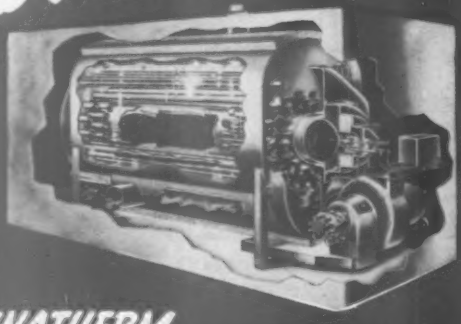
Made by: Ardmore Products, 1831 Shermer Rd., Northbrook, Ill.

"Could you step it up? I gotta haul a load of milk yet today!"

She says...

Enough hot water whenever I need it and a warm house instantly on chilly mornings . . . these things alone are worth the few dollars extra that we paid for our Dynatherm. What's more, our basement's *liveable*, now . . . it stays so clean since we got the Bethlehem Dynatherm. And the handsome cabinet takes up so little space . . . its low styling and baked enamel finish actually *add* to the beauty of our new "recreation room!"

The Bethlehem DYNATHERM



He says...

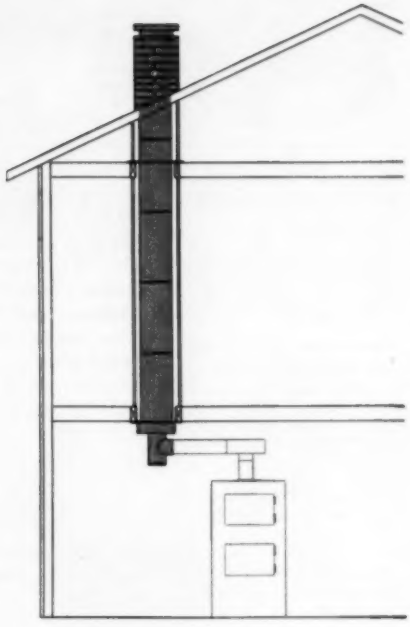
Buying the Bethlehem Dynatherm was one of my smartest investments! Ours has already paid for itself in savings on fuel and repair bills — from now on it's sheer profit! No wonder, when you look at the quality construction . . . welded steel throughout, full-length copper coils. And the Bethlehem Dynatherm is guaranteed by the world-famous Bethlehem Foundry & Machine Company!

The Bethlehem DYNATHERM

MADE ONLY BY BETHLEHEM FOUNDRY & MACHINE CO., BETHLEHEM, PA. • FOR HOMES, MOTELS, APARTMENTS, GARAGES, SMALL CHURCHES

LIGHT WEIGHT "TWIST-LOCK" METALBESTOS CHIMNEY

Simple "twist-lock" – like putting the lid on a pickle jar (no mastic, cement or screws). Perfectly safe for all fuels and incinerators (listed by Underwriters' Laboratories, Inc.). Finest materials and construction throughout assure lasting performance. Write to Department L-9 for our new METALBESTOS factory built chimney catalog CC-9.



For installation inside or outside of structure. Choice of attractive tops and complete line of fittings.

METALBESTOS DIVISION
WILLIAM WALLACE COMPANY · BELMONT, CALIF.

Manufacturing Plants in Belmont, Calif. • Logan, Ohio • Brockville, Ontario, Canada

fuel oil & oil heat

Manufacturers' Activities

(*Begins on page 54*)

Rochester of California completes modern Factory

ROCHESTER Mfg. Co. of California is now occupying a new, modern factory in Monrovia, Los Angeles County.

The move from former headquarters in Pasadena marks the expansion of the company from its laboratory products status to full scale plant production of Lindsay high pressure gauges. C. L. Hastings, president, explains that the company now will be able to maintain high quality production, but at a lower cost because of increased efficiency of operation.

OIL BURNER FUEL FILTER OBF-100

wix®

SPIN-ON TYPE

OIL BURNER FILTER

You make more money—you save time and trouble, too! Here are the best of good reasons for you to install the revolutionary WIX Spin-On Oil Burner Filter on every Oil Burner you sell or service.

Installation is simplicity itself! All you do is insert the die-cast aluminum head in any ⅜" N.P.T. line (one or two pipe . . . high or low pressure system). Then spin-on the WIX Cartridge . . . just a twist of the wrist does it . . . no tools . . . no mess . . . no filter pot to clean out! Now, the oil will be truly clean for the season. Your customers are happy and you've made friends AND profits!

The WIX Spin-On Filter is the engineered answer to unnecessary service calls. It does a much better job of filtering. Features such as the *exclusive* air bleed and the safety locking screw SELL the home owner on sight.

- Exclusive WIX POROSITE pleated paper filtrant
- Removes even microscopic foreign particles from oil
- Guaranteed to exceed 120 gph gravity flow
- Lightweight, Rustproof Aluminum construction
- COMPACT! 5 9/16" high, 2 3/4" wide—8 ounces
- Listed as Standard by Underwriters Laboratories, Inc.

WRITE:

Get the facts on this amazing WIX Spin-On Filter that makes extra profits for you.

wix®

OIL BURNER FILTERS

WIX CORPORATION • GASTONIA • N. C.

In Canada: Wix Corporation Ltd., Toronto

Sid Harvey opens two Stores; now is operating 44 in Chain

TWO NEW STORES opened by Sid Harvey, Inc., Valley Stream, N. Y., increases to 44 the number operated by the firm along the eastern seaboard. One of the new stores is located at 1290 Sheridan Drive, Buffalo, N. Y., headed by Eugene J. Shields, formerly vice-president and general manager, Sid Harvey of Pa. The new store will stock the complete Sid Harvey line of new and rebuilt parts, serving the Buffalo, Niagara Falls and Rochester areas.

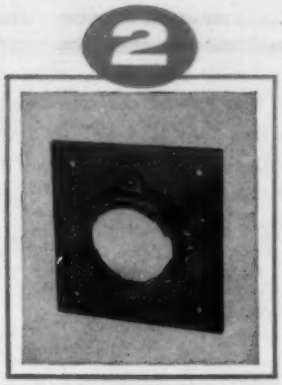
The second store opened at 224 Medford Ave., Patchogue, N. Y., managed by Kenneth Hummel, formerly assistant manager at the Babylon, L. I., store.

Manville Boiler wins Suit over patent Infringement

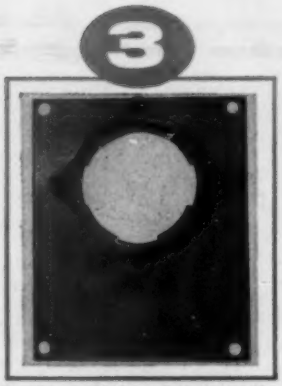
ON JULY 25 the United States Court of Appeals for the Fourth Circuit upheld the claim of Manville Boiler Co., Hackettstown, N. J., that Columbia Boiler Co., Inc., Pottstown, Pa., had infringed on patent No. 2,633,107, issued to Benedict W. Mandelburg and assigned to Manville Boiler Co.

The language of the ruling specifies that the claim of "Mandelburg patent reads upon both series of defendant's boilers having circular stack outlets," indicating that it refers only to Columbia square type boilers.

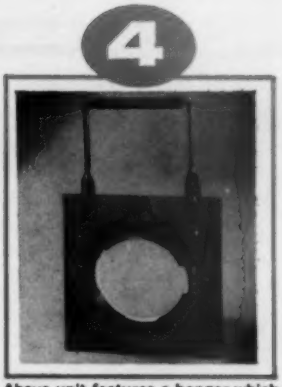
Universal Flange is easily mounted to boilers and furnaces where bolt holes or studs have been provided. Pressure shoe insures firm positioning of burner.



Lug-type flange assembled to steel plate provides practical unit for mounting to certain makes of boilers. Pressure shoe is same as used with Universal Flange, left.



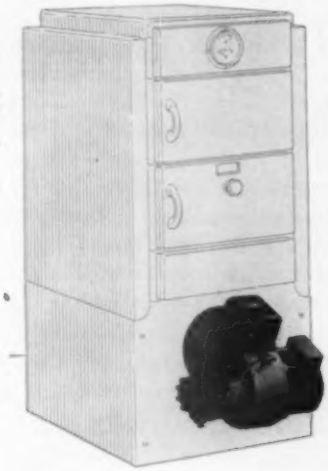
Another mounting plate using the lug-type flange. This unit is specially designed for National Radiator Series 10 cast iron and Series RO steel boilers.



Above unit features a hanger which suspends from grooved projection on boiler front. All U.S.-Carlin mounting assemblies are furnished with asbestos gaskets.

4 EASY ANSWERS

to profitable oil burner replacement sales!



NEW U.S.-CARLIN FLANGES AND MOUNTING PLATES SIMPLIFY OIL BURNER INSTALLATIONS IN MANY POPULAR BOILERS AND FURNACES

Here's a money-making opportunity to bring outmoded heating installations up to date by flange mounting a fuel-saving U.S.-Carlin Oil Burner. With the U.S.-Carlin Universal Flange, or with any of several adapter plates illustrated, you can modernize oil heating plants with a minimum of time and effort... and make yourself a good profit.

In addition to the standard flange mounted Models 150F and 150SF-2, the popular Models 400, 400S, and 500S-35 . . . formerly available with pedestals only . . . can now be flange mounted. All necessary bolts, nuts, washers, studs, and gasket material are included with U.S.-Carlin mounting assemblies.

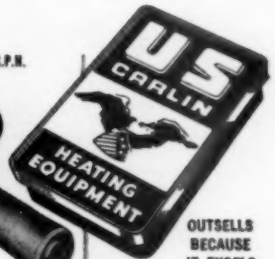
Sell your customers and prospects on replacing existing equipment with a modern U.S.-Carlin . . . the oil burner that guarantees maximum "mileage" from today's higher Btu fuel oils. Contact your heating wholesaler or write us for chart listing well-known makes of boilers and furnaces with recommended U.S.-Carlin burners and mounting assemblies.

A FULL LINE OF "SHELL HEAD" BURNERS

PEDESTAL OR FLANGE MOUNTED MODELS

ELECTRONIC CONTROLS, FACTORY MOUNTED

CAPACITIES UP TO 29.00 G.P.H.



OUTSELLS BECAUSE IT EXCELS

THE CARLIN COMPANY • WETHERSFIELD, CONN.

MID-WEST REPRESENTATION COMPLETE BURNER STOCKS AT CHICAGO

U.S.-Carlin burners are listed by Underwriters' Laboratories, Inc. and approved under U.S. Government Commercial Standard CS75-56 where applicable.

Scully Signal Co. announces Winners in drivers' Contest

THE 25 PRIZE WINNERS in the Scully Signal Co. (Melrose, Mass.) fueloil drivers' contest have been announced. Prizes ranging from a first prize of $250 to awards of $5 were made for completing the sentence "Scully products help my customers, my company and me because——."

First prize went to George Christian, driver for A. C. English Oil Co., Levittown, N. Y., who selected the VENTALARM signal, UNIFIL system and Scully nozzle as the subjects of his entry. Second prize was won by Don Schmidt, driver for T. R. Loizeaux Fuel Co., Plainfield, N. J. and third prize went to Warren M. Simms, Esso Standard Oil Co., Linden, N. J.

Winners of the fourth to the 25th prize were announced in the following order:

James H. Donnelly, W. H. Sawyer Lumber Co.; Walter L. Brousseau, Hopedale Coal & Ice Co.; Robert A. Blanchette, Blanchette Oil Co.; Marvin H. Moody, Dixon Bros.; James J. Frusco, T. R. Loizeaux Fuel Co.; Kenneth L. Collins, Islip Coal & Feed Co.; Albert G. Emond, Hathaway Oil Co.

Also, Howard Brean, Henoch Oil Co.; John Olsen, Ferns Oil Co.; Harold McClelland, Fisher Oil Co.; Dan Argentieri, Argentieri Coal Co.; Edgar Tracey, Edgar Tracey Fuels; Frederick S. Kell, Holly Oil Co.; Roger D. VanAlst, Standard Oil Co.; Warren J. Sideri, City Oil Co.

And, Gerald Shortridge, Sappenfield Coal & Oil Co.; Richard P. Brennan, Toohil's Service; Elliott Sargent, The Naugatuck Fuel Co.; Dean Wolfe, Miami County Farm Bureau; Armand J. Letourneau, J. A. Bowen Co.; John Mandiochia, Jamaica Fuel Oil; Gordon Anderson, Abbott and Mills, Inc.

It really rolls in for the Sinclair Oil Heat Distributor

Right now, the alert businessman who qualifies for a Sinclair Heating Oil franchise can build it into a real money-maker. Four major reasons support this fact:

- **You can offer premium quality products at regular prices. Sinclair Heating Oil contains an exclusive anti-rust ingredient. Result: reduced service calls.**
- **A strong advertising program—designed to be used at the local level—*where it counts most!***
- **A special sales training program—full of profitable new ideas.**
- **An assured product supply—thanks to Sinclair's huge production and ample storage facilities.**

There's much more in the market for you with Sinclair Heating Oil. For details, write: Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

Sinclair
HEATING OIL

Sinclair HEATING OIL SuperFlame

Honeywell names Managers for industrial Branches

SALES MANAGERS for industrial branches have been announced by Minneapolis-Honeywell's Industrial Products Group.

Robert A. Wolfe, former branch industrial sales manager at Albany, becomes manager at Pittsburgh; Edward J. Reulbach, Jr., of the New York City branch offices heads operations in Albany; Joseph H. Toifel moves from Youngstown to Columbus, Ohio.

Also, Willard T. Smith, former branch manager at Pittsburgh, remains in that city as account executive specializing in instrumentation for the steel and other heavy industries.

Oil Equipment appoints 3 manufacturer's Agents

THREE MANUFACTURER'S AGENTS have been named by Oil Equipment Mfg. Corp., New Haven 6, Conn., to handle its line of King fill alarms, tank gauges and related equipment. They are:

Hill-Wheeler Co., Conshohocken, Pa., covering Maryland and Delaware, as well as eastern Pennsylvania and southern New Jersey;

W. A. Roben Co., Seattle, in Washington, Oregon, Idaho and British Columbia.

General Appliance Co., Minneapolis, in Minnesota, Iowa and western Wisconsin.

BOOST FUEL OIL DELIVERY by 10%

add stops-per-day

NEW BUCKEYE NOZZLE...SWIVEL...for low pressure-drop at high capacity

No. 125 FUEL OIL NOZZLE

Available with either 1¼" or 1½" IPT inlet — with or without tube and with or without integral check valve

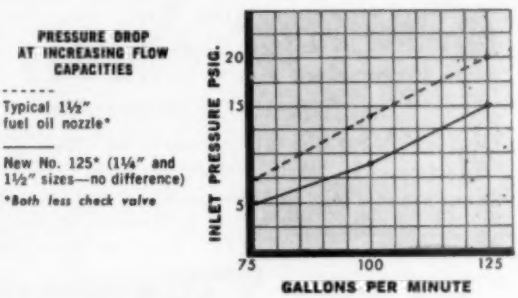
- Less than 10 lb. drop at 100 gpm.*
- Higher lift, seat diameter larger than outlet tube.
- Designed for 125 gpm flow rate.
- Easy to open, easy to close because of hydraulically balanced design. No hammer or chatter.
- 4-notch replaceable guard permits easy control.

**Tested on nozzle without internal check*

No. 126 SWIVEL. Available in 2 sizes—1¼" and 1½"

- Fully repairable: remove plug and ball bearings. Bearings and quad-ring seal easily replaced.
- Teflon and ball bearings for easy operation.
- Full pipe size opening at both ends. Female portion of swivel (hose end) is larger than hose coupling—easy to attach and detach.
- Increases hose life. Prevents kinks, twists and damaging tension. Allows hose and valve to turn independently.
- Permanent lubrication of bearings; grease-sealed at factory.

To you, time is money — and increased delivery capacity of your equipment adds to the number of stops your trucks can make per day. This new Buckeye combination is the only such system designed to give you low pressure drop at flow rates up to 125 gpm—virtually an "open pipe" system. Write for more information or contact your Buckeye distributor.



Buckeye **BUCKEYE IRON & BRASS WORKS**
Box 883 • Dayton, Ohio

General Controls trains Reps; establishes International Div.

FIELD REPRESENTATIVES from 14 U. S. cities and Toronto, Canada, have completed the annual heating controls course held by General Controls Co. at its home office in Glendale, Calif.

Robert L. Farmer, manager of product training and services supervised the instruction, assisted by Jack Wolff and Hugh Cameron, heating division managers. The course was designed to introduce new heating control products and their applications, and review uses for products currently on the market.

General also has set up an International Division, headed by Remy H. Ludwig, to handle organizational arrangements, procurement, manufacturing, sales, licensing and distribution of products in all areas outside the United States where the company has or establishes functioning units, excluding Canada and Mexico. Formation of the Division follows by six months General's establishment of a West German subsidiary in Dusseldorf.

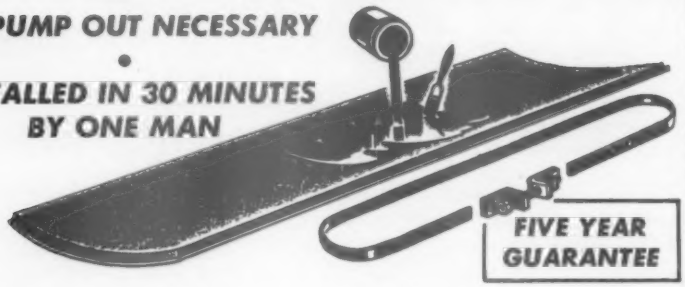
STOP TANK LEAKS

-PERMANENTLY with SID HARVEY'S PERMANENT TANK BOTTOM

NO PUMP OUT NECESSARY

•

INSTALLED IN 30 MINUTES BY ONE MAN



FIVE YEAR GUARANTEE

The Permanent Tank Bottom is a thick coating of Buna-N compound (like sponge rubber) bonded to a heavy steel plate which is formed to fit the contour of the entire bottom of a 275 gallon tank. This is sealed and clamped to the tank with 5 rust proof bands, making a neat and workmanlike job.

LOW COST

The Harvey Permanent Tank Bottom is guaranteed five times longer than a new tank, at HALF THE COST.

OUNCE OF PREVENTION

Don't wait for old tanks to give out. Sell your customer with tanks 10 years old or older the desirability of a Permanent Tank Bottom and end the fear of tank leaks.

3 SIZES
The Harvey Permanent Tank Bottom comes in 60", 66" and 72" lengths, all are 10" wide.

SID HARVEY INC.
VALLEY STREAM NEW YORK

AVAILABLE AT ALL 42 SID HARVEY STORES OR BY MAIL

Perfection Industries Program to develop replacement Sales

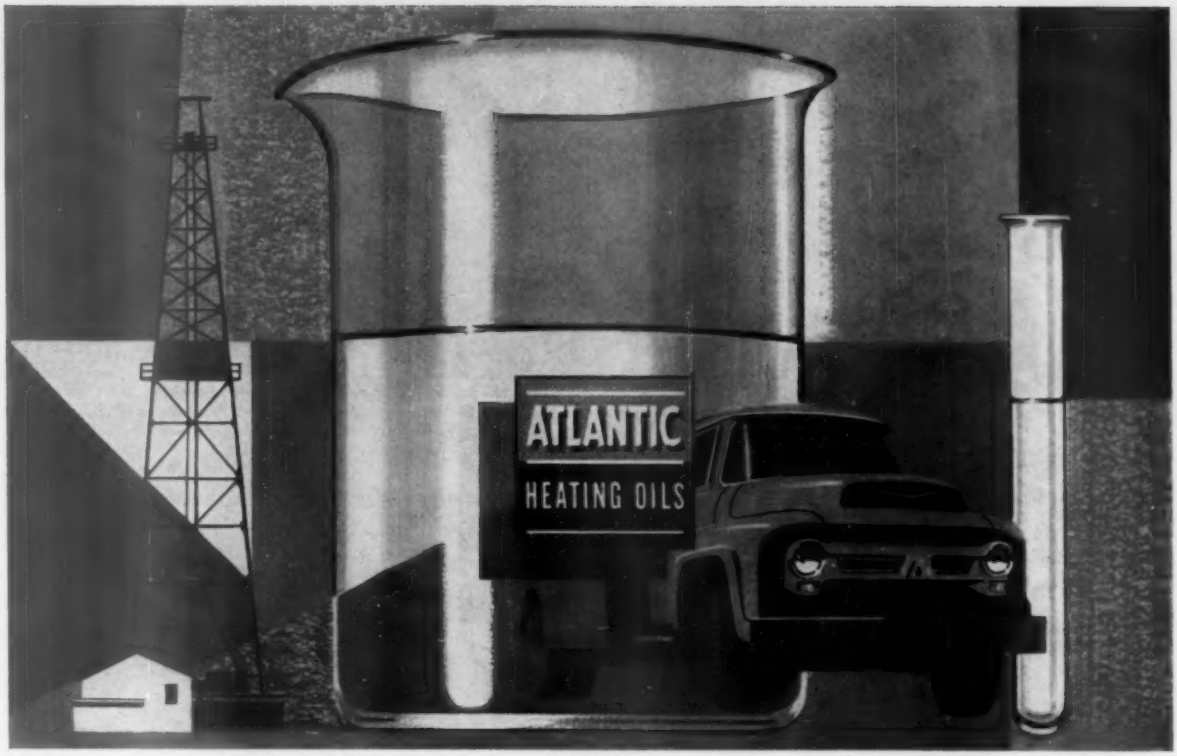
A PACKAGED PROGRAM of sales developers was previewed by Perfection Industries, Cleveland 10, Ohio at a Grand Rapids, Mich. meeting, preliminary to a whirlwind tour by Stuart A. Smith, furnace sales manager, to explain details in each of the company's sales districts.

Campaign material is furnished in a portfolio which itself serves as a wall or window banner when unfurled. In addition, there are newspaper ad mats, special direct mail pieces, door hangers, radio commercials and clever classified column inserts.

Heart of the campaign is the Home Comfort Index, with sales literature encouraging prospects to call in their "Perfectionist" for free survey of their heating and cooling system needs. The doorhanger tells the homeowner how to analyze his own heating system and also contains a reply card requesting the full scale survey.

The program, Smith feels enables the dealers to select and sell the prime prospects in his area—the older homes or the project homes where uncomfortable or inadequate heating might have been installed.

The world's largest positive displacement meter, designed by Ralph N. Brodie Co., San Leandro, Calif. stands 9 ft. high with a working capacity of 20,000 bbls. per hour at 150 psi. It's built to measure crude and refined products with precision at full-rated capacity. The meter held by the man illustrates the range of sizes available.



YOU CAN ENJOY MORE PROFIT...

THROUGH ATLANTIC QUALITY, RESEARCH AND SERVICE

Atlantic Heating Oils mean quality because:

- Atlantic's exclusive triple-refining process assures every Atlantic Distributor and his customers top value in clean, modern heat.
- Atlantic's continuous research provides vastly improved products to meet growing public needs.
- Atlantic's proven 89-year reputation for refining skill and marketing know-how.

Atlantic services can produce increased efficiency and more sales because:

- Atlantic maintains a proven Distributor Advisory Committee to help with all phases of heating oil sales and distribution.
- Atlantic offers complete training in all aspects of heating oil marketing.
- Atlantic Operations specialists provide expert assistance and guidance in analyzing and solving specific distributor problems.
- Atlantic's personal estate planning helps provide greater future security.

For complete information about convenient supply points and the advantages of an Atlantic Distributorship, call or write The Atlantic Refining Company at the nearest regional office listed below.

ATLANTIC
HEATING OILS

PROVIDENCE, R. I.
430 Hospital Trust Building

SYRACUSE, N. Y.
120 West Genesee Street

PHILADELPHIA, PA.
260 South Broad Street

WEST READING, PA.
First & Penn Avenues

PITTSBURGH, PA.
1100 Chamber of Commerce Bldg.

CHARLOTTE, N. C.
1112 South Boulevard

THE ATLANTIC REFINING COMPANY • *Producer, Refiner and Marketer of Quality Petroleum Products*

Westinghouse Airconditioning Course by Mail enrolls 2000

MORE THAN 2000 people are enrolled in the airconditioning correspondence course offered by Westinghouse Electric Corp. Lessons have been mailed directly to the students (employees of the company's distributors and dealers) from the factory in Staunton, Va., since January 1.

Carol Cannon, training director for the company's Airconditioning Division, has found the correspondence technique a practical approach to having trained field representation.

He noted that every corner of the country can be covered. Through regular mailings, the programs can be continuous and up-to-date and not subject to infrequent field meetings. Subject matter can be unlimited—not restricted to the individual capabilities of field personnel. The course is free of cost to the distributor organization.

Lessons are mailed every two weeks and consist of a subject discussion booklet, an assignment problem and an answer summary for the previous lesson assignment.

Inspecting Johnson Furnace Air-Ease units as they come off the assembly line at the firm's Cleveland factory are, left to right: Almon Chapin, vice-president, production; Frank Johnson, president; Tom McIntyre, representing Viking blowers; James Crombie, vice-president, sales.

Oil Equipment Mfg. Company enlarges Louisville Plant

SEVERAL ADDITIONS have been made to the plant and offices of the Oil Equipment Manufacturing Co., Louisville, Ky.

A large extension was added to the manufacturing and shipping departments. The offices and engineering departments are now housed in a two-story brick building connected to the plant proper.

Wall Chart featuring Valves is available from A. W. Cash

A WALL CHART featuring reference data on the manufacturer's products is available from A. W. Cash Valve Mfg. Corp., Decatur, Ill.

The two-color chart has information on hydronic heating controls, relief valves, pressure regulators and safety devices. For a free copy write Cash-Acme, Box 191, Decatur, Ill., and ask for wall chart, No. 59.

GENERAL HUMIDIFIER puts moisture in... GENERAL FILTER takes harmful dirt out!

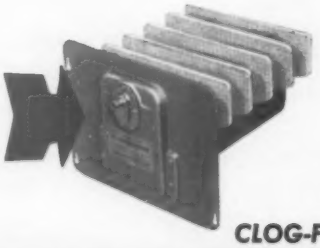
Here's your 1-2 sales punch for boosting service volume and profits. For a very small investment *your* customers can enjoy the twin benefits of *increased home humidity* and *steady, more economical heating.*

General Humidifier has no float or other troublesome parts—requires no tricky mounting. Fits any updraft warm air furnace. Performance is fully automatic.

General Fuel Oil Filters trap both moisture and solids which clog burner nozzles and lower heating efficiency. Oil filtered through General's wool felt cartridge burns cleaner, hotter and more evenly—*saves you call-backs!*

General Fuel Oil Filter

- Iron and steel construction protected with rust-resistant plastic coating
- Wool felt cartridge, cleaned and bonded to center core, won't flake or crumble. Small pieces can't plug nozzles.
- 1A-25A, 2A-700A, 2A-300



Model 800 "Moisture-Matic"

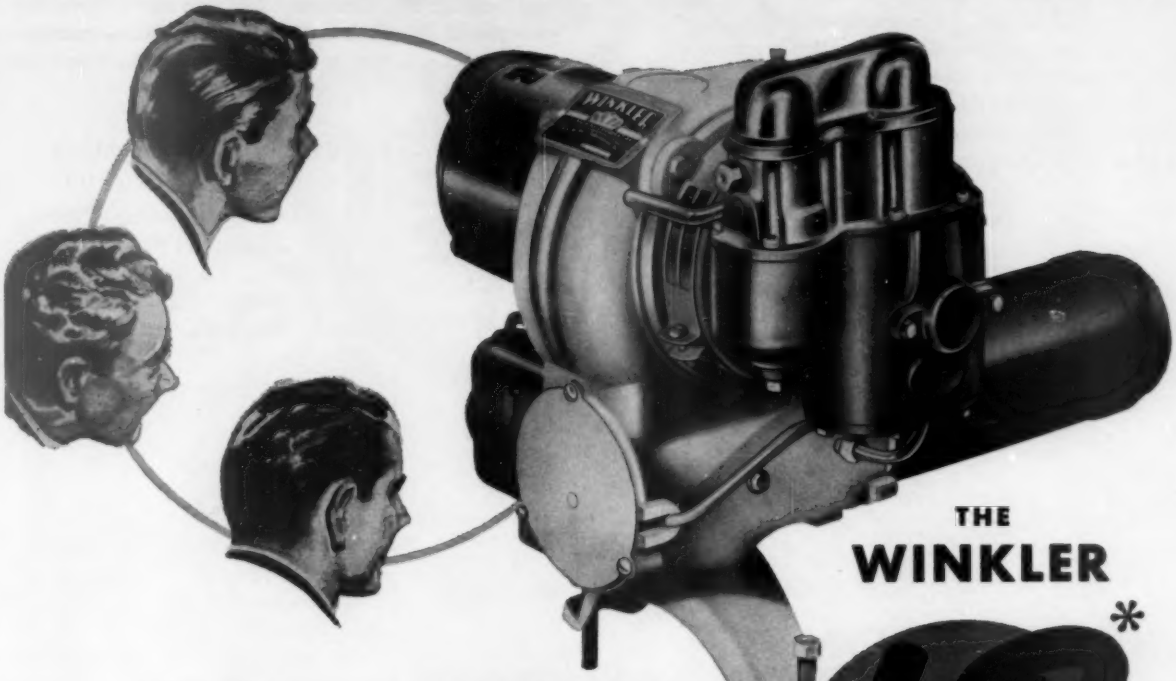
- Corrosion-proof molded pan
- Lifetime neoprene diaphragm
- Chrome plated valve
- Removable nameplate for inspection
- Holds up to 15 "Porous Weave" plates
- 1-year parts guarantee

Member of the Humidifier Association

CLOG-FREE . . . AUTOMATIC!

GENERAL FILTERS, INC.
43800 GRAND RIVER AVE., NOVI, MICHIGAN

THE OIL MAN'S BEST FRIEND!



THE
WINKLER
LP*
*LOW PRESSURE
OIL
BURNER

the oil burner with a real sales story... proved to save up to 50%

Here's the revolutionary oil burner that gives you a better sales story—and a better profit picture! With the Winkler LP Oil Burner you have something to talk about besides price!

This amazing oil burner has been proved to cut oil consumption up to 50%—pays for itself within a fraction of its long life!

The Winkler LP achieves this economy because its non-clog nozzle and positive action fuel meter permit exact sizing of the burner to the heat requirements of the building...avoids the penalties of frequent cold starts. And with the LP costly service work is virtually eliminated.

Write today for full information on how to obtain a Direct Factory Franchise for the Stewart-Warner-Winkler LP Burner and complete line of furnaces, boilers and cooling equipment.

CLOG PROOF NOZZLE—GUARANTEED 10 YEARS

Won't clog with dirt particles or change capacity with varying oil viscosity.

The Winkler LP Demonstration Unit enables you to prove—*right in your own showroom*—the amazing efficiency of this burner!

Symbol of SW Excellence

STEWART-WARNER

HEATING AND AIR CONDITIONING DIVISION

Dept. H-99, Lebanon, Indiana

fuel oil & oil heat

Anderson Products consolidates Activities in a single Location

ANDERSON Products Co. has completed a move to new quarters at 34 Crafts St., Newtonville 60, Mass.

The move consolidates at one location the manufacture, assembly and sale of Vent-Rite vents.

White-Rodgers organizes Technical Advisory Group

WHITE-RODGERS CO., St. Louis, Mo., has formed a Technical Advisory Group as part of its field sales organization. The new group will disseminate technical product information from general offices to the sales force and will assist in the application of White-Rodgers controls to customer products, working with original equipment manufacturers.

Walter W. Scott and Frank Crawford, long-time White-Rodgers representatives, are the first members to be named to the Group. Scott's duties will keep him in the same area he has been working in, Ohio, West Virginia, Michigan, eastern Kentucky, western Pennsylvania and western New York. Crawford will continue to cover the New York sales territory, including New England, Pennsylvania and the Mid-Atlantic states.

Catalog of heating Controls is made available by Penn

A NEW CATALOG of heating controls is now available from Penn Controls, Inc., Goshen, Ind.

Several new listings are shown in addition to controls previously cataloged. Copies may be obtained by writing the company and requesting Bulletin 1508-AF.

❖

Curtis R. Welborn has retired as president of Underwriters' Laboratories, Inc., Chicago. He joined Underwriters in 1920 and in 1924 was appointed superintendent of the label service department. He was elected secretary in 1935, executive vice-president in 1947, and became president in 1948. He will be succeeded by *Merwin M. Brandon* who first became associated with the organization in 1921. *Clarke Smith*, U. S. manager, Royal Insurance Co., Ltd., was elected chairman of the board to replace *C. W. Ohlsen*, retired.

C. E. Lapp, president, Oil Producers Association of Los Angeles, was honored at a testimonial reception on June 23. He received a framed testimonial signed by association members in appreciation "for the many years of unselfish service" to the organization, whose president he has been since 1933. Lapp has been in the oil producing business since 1900 and is owner of the Square Oil Co., formed in 1908.

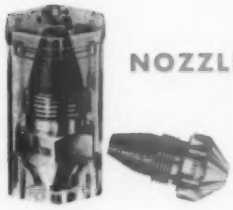
Louis C. Roosevelt and *Donald L. LeBlanc* have been named district sales managers, Viking Air Products Division, National-U. S. Radiator Corp., Cleveland, O. Roosevelt's territory will include Michigan, Indiana and Ohio, and LeBlanc will handle manufacturing and jobber accounts in Connecticut, northern New Jersey, southern New York and New England.

DEPEND ON

Eddington

FOR ORIGINAL INSTALLATIONS

MAINTENANCE & REPLACEMENT PARTS



NOZZLES

The Eddington new one piece porous bronze nozzle filter is another Eddington achievement for smoother trouble-free oil burner service. It is designed to permit the flow to pass through with the least amount of restriction and still give more effective filtering than 200 mesh strainers. Recommended for use on nozzle ranges from .50 gph through 1.00 gph and larger flows if so desired.

FILTERS

Die cast aluminum body. Light weight. Rust and corrosion proof. Large sump. Felt cartridge. Greater filtering surface area. Interchangeable with other makes.

Eddington

- High & Low Pressure Nozzles
- Combustion Heads
- Filters—Strainers
- Condensate Disposal Units
- Pressure Regulating Valves
- Nozzle Adaptors
- Air Cones—Stabilizers
- Servicemen's Kits
- Inspection Mirrors

COMBUSTION HEADS

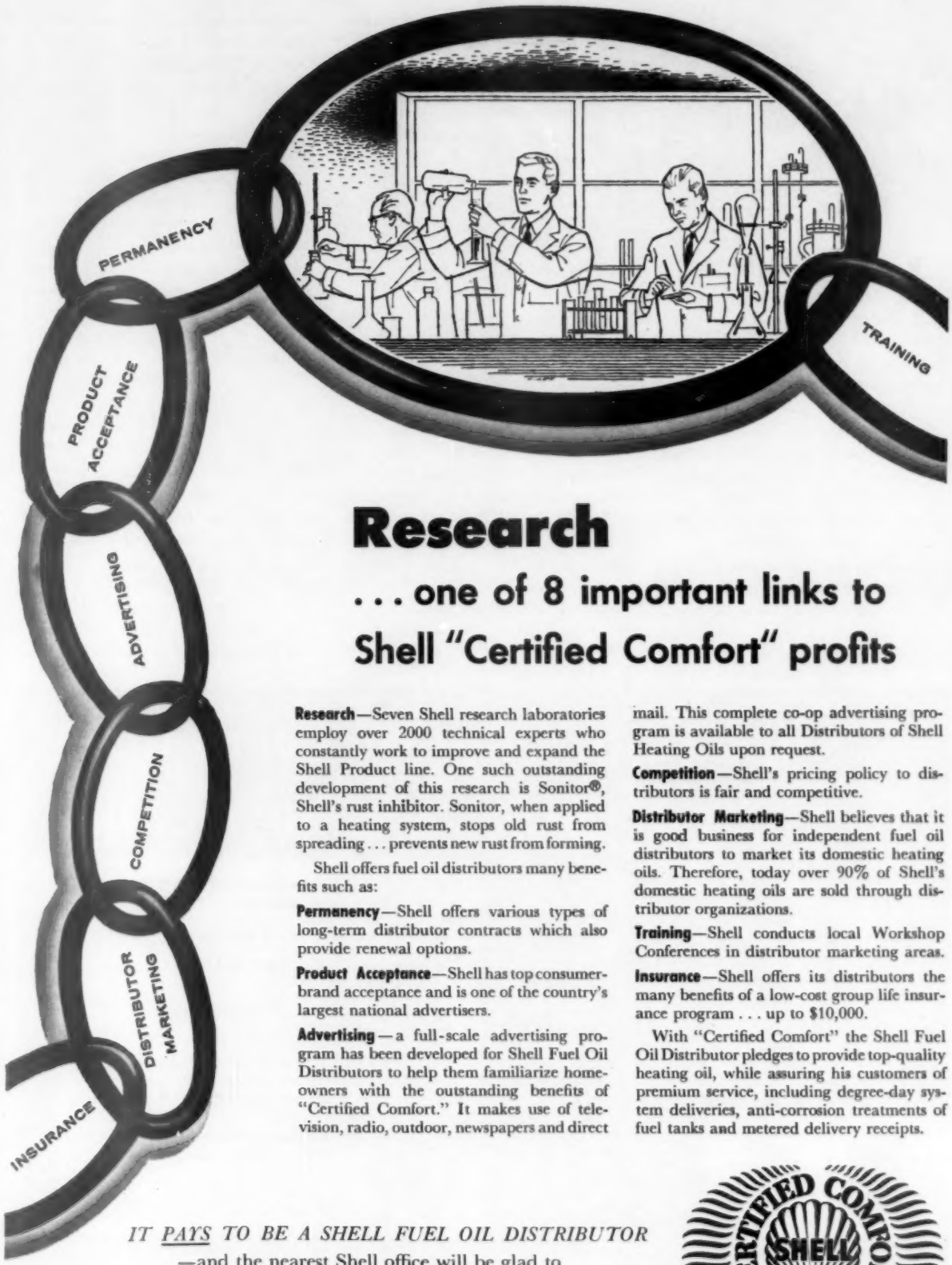
For high and low pressure type oil burners. Easily adaptable to conventional types. Saves up to 30% in fuel. Model LP53 converts high, to low pressure burners. No change in housing design necessary. Range of capacities from .4 to 2.00 gph.

CONDENSATE PUMPS

Removes condensation from air conditioning, refrigeration and dehumidifying units. Compact, dependable. Simplified automatic liquid level control. Pumps heads to heights of 20 ft. Height base to top 10 inches.

Eddington OIL BURNER ACCESSORIES Nozzles

EDDINGTON METAL SPECIALTY COMPANY, EDDINGTON, PENNSYLVANIA



Research

. . . one of 8 important links to Shell "Certified Comfort" profits

Research—Seven Shell research laboratories employ over 2000 technical experts who constantly work to improve and expand the Shell Product line. One such outstanding development of this research is Sonitor®, Shell's rust inhibitor. Sonitor, when applied to a heating system, stops old rust from spreading . . . prevents new rust from forming.

Shell offers fuel oil distributors many benefits such as:

Permanency—Shell offers various types of long-term distributor contracts which also provide renewal options.

Product Acceptance—Shell has top consumer-brand acceptance and is one of the country's largest national advertisers.

Advertising—a full-scale advertising program has been developed for Shell Fuel Oil Distributors to help them familiarize homeowners with the outstanding benefits of "Certified Comfort." It makes use of television, radio, outdoor, newspapers and direct mail. This complete co-op advertising program is available to all Distributors of Shell Heating Oils upon request.

Competition—Shell's pricing policy to distributors is fair and competitive.

Distributor Marketing—Shell believes that it is good business for independent fuel oil distributors to market its domestic heating oils. Therefore, today over 90% of Shell's domestic heating oils are sold through distributor organizations.

Training—Shell conducts local Workshop Conferences in distributor marketing areas.

Insurance—Shell offers its distributors the many benefits of a low-cost group life insurance program . . . up to $10,000.

With "Certified Comfort" the Shell Fuel Oil Distributor pledges to provide top-quality heating oil, while assuring his customers of premium service, including degree-day system deliveries, anti-corrosion treatments of fuel tanks and metered delivery receipts.

IT PAYS TO BE A SHELL FUEL OIL DISTRIBUTOR
—and the nearest Shell office will be glad to show you why. Ask for the District Manager.

CERTIFIED COMFORT
SHELL
HEATING OILS

Readers' Problems

Q. Attention Mr. J. W. Schulz, please: I am a retail fueloil salesman for one of the larger independents out here on the Island.

Often a new homeowner asks me when he should drain his expansion tank, or a similar reasonable question. Of course, I try to answer. However, I have heard many different answers from "Heating Engineers," service managers, servicemen, etc.

I want to learn from you what the facts are. When an expansion tank becomes waterlogged, what happened to the air that was in the tank? How do you know whether the relief valve opened because the regulator did not hold the set pressure, the tank has a minute hole near its top portion through which the air escaped, or the water absorbed the air?

Some experienced men connect the expansion tank to the top of the boiler direct and extend the main pipe down into the boiler a few inches to collect the air inside the top of the boiler. They say using this idea prevents waterlogging of the expansion tank.

Then, too, manufacturers have come out with a flow-control valve with a built-in scoop to catch the air and send it to the expansion tank—the tank is connected properly of course to the flow-control valve.

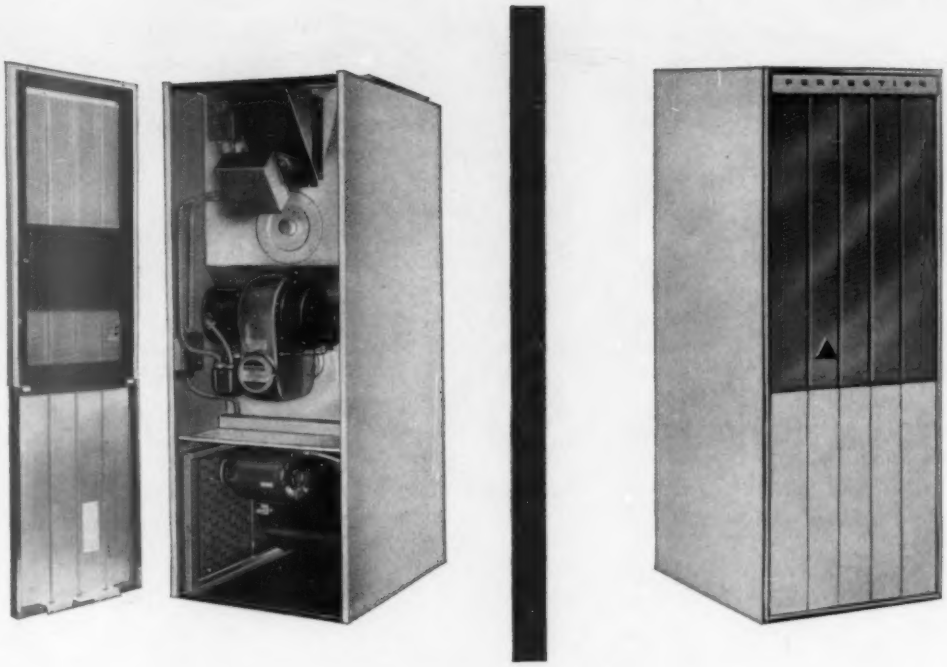
I have been in a home where the husband kept a garden hose connected to the expansion tank and drained the tank about every two weeks. Someone told him to do that. On the other hand, I know of a home where the tank has not been drained for three years and is operating normally.

A. H. G., Smithtown, N. Y.

A. 1. As you probably realize, work done by a well-informed serviceman, not by a fueloil salesman, is needed to diagnose and repair the kind of hot-water system troubles you describe. Yet, and as you have found out, often a fueloil salesman must discuss such troubles with his customers. The fueloil salesman should know enough to describe proper operation of, and common troubles of, hot-water systems to his customers.

2. Proper operation of a closed, hot-water system includes no escape of water from the system from one end of the year to the other, no feeding of make-up water into the system through its automatic feed valve, and no need for draining water from the expansion tank. Such operation results from: (a) Proper adjustment of the automatic feed valve—it should be set just high enough to permit air-ridding the highest radiators, of course when the system's pressure is at its lowest or at the pressure for which the automatic feed valve is set; (b) Proper operation of the relief valve, or opening of this valve at 30 lbs. pressure; (c) Use of a large

the right filter for every use
Klemm FUEL OIL FILTERS
FF-530V (Metal Bowl with Shut-Off Valve)
FF-430G (Glass Bowl)
CHEMISTONE® ELEMENT . . . True Filter, not a strainer; long-lasting, cleanable . . . exclusive with Klemm.
● MODELS AVAILABLE FOR EVERY HEATING APPLICATION
● CHOICE OF GLASS OR METAL BOWLS
● BUILT-IN SHUT-OFF VALVES AVAILABLE
● EXCLUSIVE CHEMISTONE FILTER ELEMENTS
No matter what kind of an oil burning installation you're selling or servicing, there's a time-proved, customer-satisfying Klemm Fuel Oil Filter to keep it running . . . and running right. That's why it pays to insist on genuine Klemm Filters — "Millions Since 1932."
APPROVED MODELS AVAILABLE
Klemm PRODUCTS
DIVISION OF KLEMM AUTOMOTIVE PRODUCTS COMPANY
1722 North Damen Avenue, Chicago 47, Illinois
EXPORT Guterman Co., Inc., New York 4 • CANADA Elgee, Ltd., Toronto



An open and shut case of good design

If you're looking for a better furnace, there's no need to put them *all* on trial. Perfection pleads guilty of good design on every count! At last all objections have been overruled in this brilliant new line, packed with features that furnace men have wanted for years. Examine the case:

EXHIBIT "A" **(Styling)** The same smart styling that won world fame at the Brussels Fair, where Perfection was the only furnace chosen to represent "residential heating of the future".

EXHIBIT "B" **(Regulaire)** Only Perfection gives you the even heat circulation of famous Regulaire, the patented electro-magic blower control that matches heat supply to heat loss like no other furnace can.

EXHIBIT "C" **(Installation)** All controls are factory wired and mounted. There's nothing to assemble, no internal wiring. Even the stack control and draft regulator are inside the cabinet, already mounted!

EXHIBIT "D" **(Efficiency)** Radical new multi-jet fuel blender is the most efficient ever devised, vaporizes the fuel more completely, converting every ounce of oil into instant flaming heat. Aluminized radiation shield forms inner cabinet that cuts heat loss to the bone.

EXHIBIT "E" **(Silence)** New fuel-blending principle puts a virtual end to burner pulsation. Slow-speed, rubber-mounted blower is free of noisy vibration, yet develops ample capacity for cooling.

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enough expansion tank—a tank so large that raising the temperature of the entire system from 70°F. to its maximum or design operating temperature does not raise the boiler pressure to 30 lbs. and does not result in escape of water from the relief valve; (d) Proper operation of the automatic valves—not a drop of water an hour should pass through one of these valves when it should be closed; (e) Having the proper amount of air in the expansion tank, which is not difficult to accomplish in a system of proper design, equipped with an expansion tank free of leaks.

3. Need to drain water from an expansion tank shows up as faulty operation of the system. Usually the system's pressure runs too high when the radiator temperature increases to maximum or design. The fact that the tank needed draining is verified later—by proper operation of the system after the draining.

4. Need to drain an expansion tank periodically, say twice a heating season or more often, definitely indicates trouble that should be diagnosed and remedied by a competent serviceman.

5. The pressure-relief valve should be installed in a fashion that causes the homeowner to notice any escape of water from it. If the valve drips steadily or if an appreciable amount of water comes out of it any day, say a quart or more of water, the homeowner should recognize his system has trouble that should be diagnosed properly and remedied. He should phone for a serviceman.

6. Use the hand valve in the feed line to the automatic feed valve, to find out if the automatic feed valve is failing to close dead-tight when it should. Close the hand valve, and water cannot continue leaking into the system through a defective automatic feed valve. Keeping the hand valve closed for a week, for example, with the operation of the system closely observed in interests of safety, in one instance ended the escape of much water per day from the relief valve—and proved the automatic feed valve was incapable of closing dead-tight.

7. To find out whether or not an expansion tank has leaks which permit air to escape and cause waterlogging of the tank, a serviceman can drain the tank completely, put 30 lbs. of air pressure in it, return to the job the next day to find out if the air pressure dropped.

8. Daily trickling or spurting of water from the relief valve will overwork it and result in its failing to close dead-tight; it will be accompanied by overworking of the automatic feed valve, which will cause it also to become defective and fail to close dead-tight. Failure of the automatic feed valve to close dead-tight overworks and damages the relief valve. Thus trouble with either valve, in the form of the valve's failing to close dead-tight when it should, soon causes trouble in the other valve.

9. Knowledge of modern, hot-water heating systems includes full details about the idea, new in the last ten years, of using low-water controls (of the type first made for steam boilers) to protect the boilers of these systems from damage related to run-

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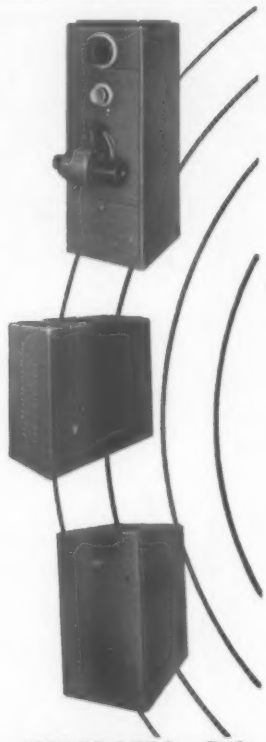

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ning the burners while insufficient water is in the systems and boilers. You should obtain full details about this from McDonnell & Miller.

Q. In his article in your January, 1959 issue, Jean L. Dupuis says he knows dealers who remove the automatic cup-line electric preheaters installed on burners by their manufacturers, and install instead electric heaters of much greater capacity. After reading this, I doubled the size of the cup-line heater on a burner that gave trouble all winter, and I ended the trouble. This burner started up all right with the smaller cup-line heater, because with the burner idle its electric heater kept the fueloil in it at high temperature during standby. At first during a start-up, very hot oil went to the atomizing cup with the result that ignition was excellent and combustion was all right, thanks to fine atomization, for a few minutes. Then combustion became poor, because atomization became coarse. An indirect fueloil preheater on the side of the boiler provided oil for the cup-line at a temperature of only 125°F. Although it came on automatically and stayed on then continuously all the while the burner ran (I checked this easily using a snap-on ammeter on the electric line to the cup-line heater), the heater on the burner could not raise the cup-line fueloil to a temperature high enough for excellent atomization. Fueloil not heated enough for excellent atomization went to the atomizing cup. Carbon was deposited, as one result of this, in the front of the firebox. This carbon had to be knocked off and cleaned away every day. The flame was sloppy. Much fueloil was wasted because of the poor atomization and poor combustion.

As I ascertain easily using the snap-on ammeter, the new, larger, electric fueloil heater I installed keeps on cutting in and out all the while the burner is running now. It heats the cup-line oil to a high temperature.

My question is: What can I go by in setting the electric thermostat of this new heater? This particular make rotary burner works best using the particular No. 6 oil, I believe, with the oil going to the cup at above 150° F. I need instructions on adjusting an automatic, electric fueloil preheater located in an oilburner cup-line.

D. Y. L., Washington, D. C.

A. First, make a check-up with the oilburner idle, and its electric preheater turned on. Use your snap-on ammeter to report the flow of electricity to the electric heater. Tentatively set the heater's thermostat so high that, with your ear close to the heater, you hear the fueloil in it boiling just before the thermostat circuit opens and turns off the heater. Then set the thermostat a bit lower. Wind up with the thermostat marked for the highest setting you can use without boiling the fueloil in the heater when the burner is not running. Don't set the heater's thermostat higher than that, for with the burner idle the fueloil in its heater should not be heated enough to boil.

Second, keep the burner running. Set the heater's thermostat low, then higher and higher, gradually, until the flame spits and gasps because of high temperatures in the heater boiling the

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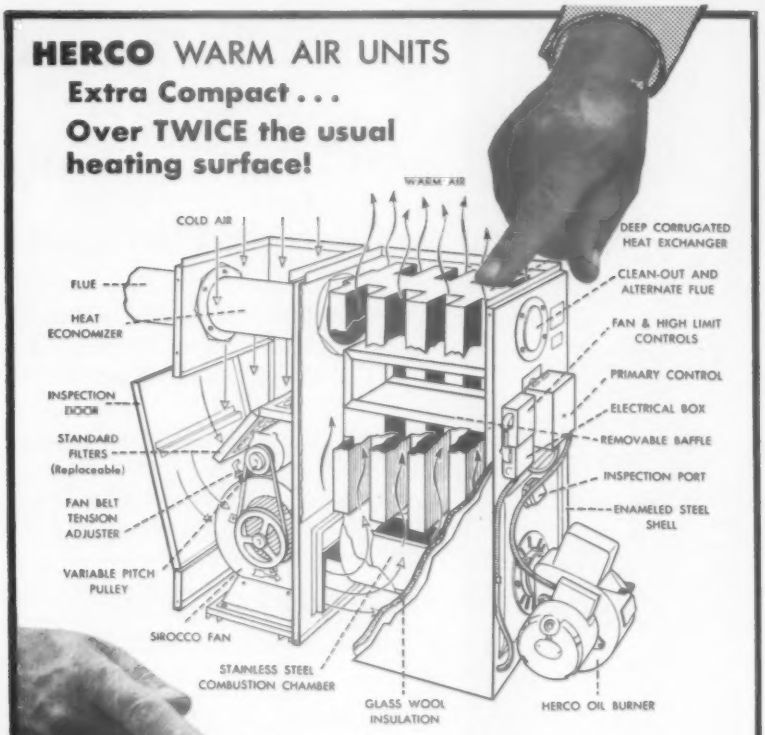

Look at the drawing. The deep corrugations of the heat exchanger provide more heat in less space. Herco's are also easy to clean and service. Burner and connected stainless steel combustion chamber slide out together. Each unit is a complete package . . . fully assembled, factory wired and fire tested. All at a competitive price!

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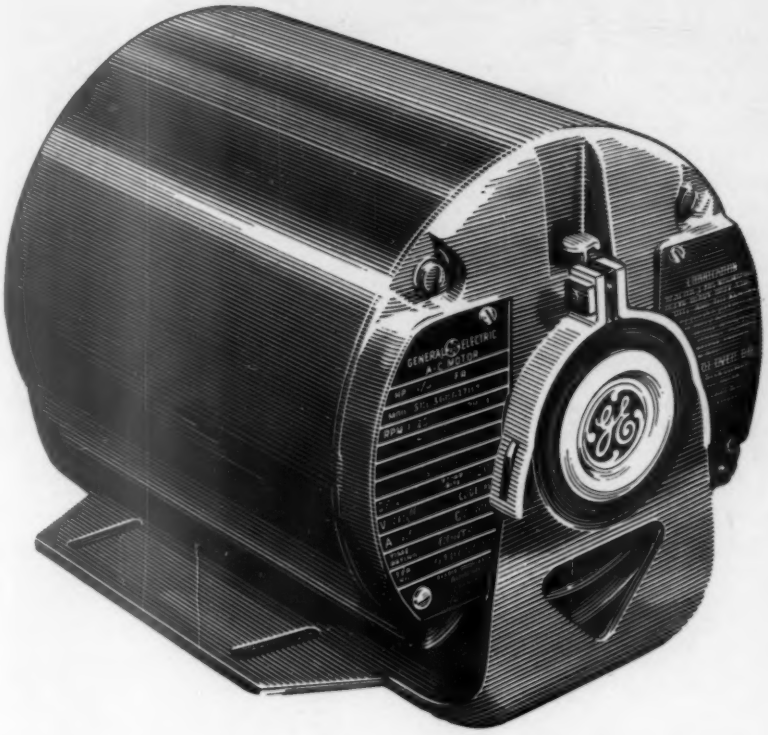

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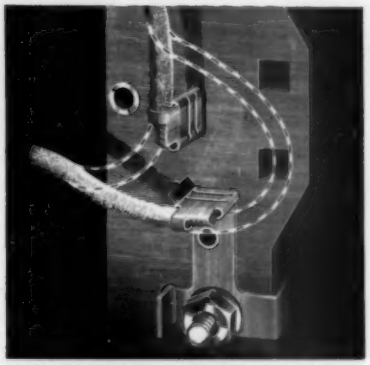
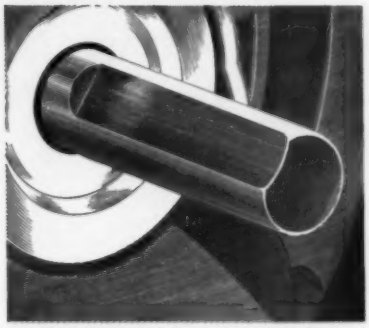


FAST ROTATION CHANGE (simply switch plug-in lead connectors to change rotation) minimizes service stocks needed.



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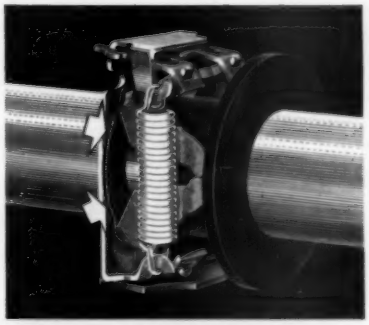


QUIETER, DEPENDABLE SWITCH has a special washer to cushion start-stop click, maintains positive snap action.

cup-line fueloil. Mark the thermostat setting. Don't ever set the thermostat this high, either.

Third, put your hand on the middle of the heater and check its temperature with the burner idle, and with it running. Check the temperature of the oil-output line of the heater with the burner running. These check-ups, together with observing the performance of the oilburner, will help you adjust the heater's thermostat properly.

The next time you install a larger heater on a burner, install a thermometer in its fueloil-output line. Install a dial-type thermometer in a pipe tee, with its sensitive element immersed in the fueloil, of course. That type of thermometer responds rapidly to changes in the temperature of the fueloil.

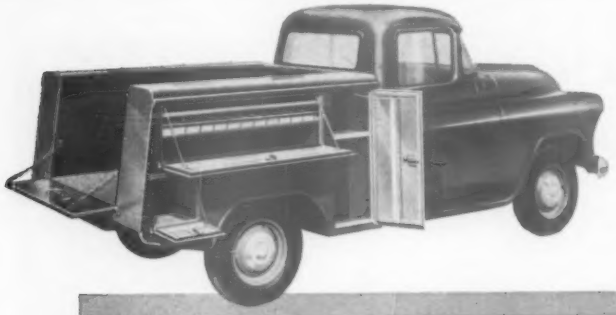
Q. As a fueloil salesman, I run into problems about which grades of fueloil are needed for commercial installations installed to use fueloil heavier than No. 2. Some months ago, my company delivered a load of what we bill as No. 5 oil to a new installation with a burner UL-listed for this grade. The company that had sold the burner installation got into trouble and finally told us that, our No. 5 oil was too viscous for this installation because its suction line is of 3/4" size, is especially long in extending 120 ft., and is uncommonly cold during winter weather. We lost the account to a competitor who seems to deliver No. 4 oil while billing it as No. 5.

J. R. O., Brooklyn, N. Y.

A. The fact is, as you must know, that many if not most of the oil companies in your locality are delivering relatively light fueloil when No. 5 is ordered. Their "No. 5 oil" is far from being the heaviest, most viscous fueloil that properly can be termed No. 5. Also, many installers of burners in your locality are putting in 3/4" suction lines when they sell burners UL-listed for No. 5 oil, though these installers would put in much larger suction lines, perhaps of 1 1/4" size, if they expected the delivery of the heaviest, most viscous fueloils that can pass as No. 5. Under these conditions, perhaps your company should consider selling "No. 5 oil" comparable to the "No. 5 oil" usually sold by its most important competitors.

Q. We are getting "fuel savings up to 45%" all right by following the instructions of your January issue article which bears that title. But we have a new trouble, for on some days we get a fuel savings of 100%! I'll have to explain that. Ever since we installed the "heat rake" baffles in this coal-designed boiler that heats a four-family house, at least once-a-week the oilburner goes off on safety. That's the day the use of your ideas saves 100% of the fueloil used previously.

This is a hot-water heating system. Baffling the boiler reduces its stack temperature from 730°F. (high enough for the stack control to work beautifully throughout the ten-odd years this burner has been used) to a mere 385°F. Following your instructions, we also reduced the firing rate about one-third, from 3.5 gph to 2.25 gph. Everything is simply fine, excepting that we've got big trouble we never



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"456 new customers in 10 months after we changed to Texaco"

Selling more than 60 million gallons annually, Suburban Fuel Oil Service, Inc., Mt. Vernon, N. Y., is one of the nation's largest distributors of heating oil. After 31 years in business, the Company switched to Texaco Fuel Chief Heating Oil, when tests convinced them that it was the finest oil.

"In just 10 months we picked up 456 new accounts," says P. Boice Esser, President. "This was an increase of about 30% over the same period the previous year."

Mr. Esser attributed this fine showing to the fact that Texaco products have won national acceptance with motorists and home owners, the trouble-free quality of Texaco Fuel Chief, plus Texaco's cooperative advertising program. "We are happy, too, with our Texaco setup. We like the Texaco people, and the way they do business," he said.

A solid future is one of the advantages of being a Texaco Distributor. There may be an opportunity for you. Call or write the nearest Texaco Division Office: Atlanta, Ga.; Boston 16, Mass.; Buffalo 5, N. Y.; Butte, Mont.; Chicago 4, Ill.; Dallas 1, Tex.; Denver 3, Colo.; Houston 2, Tex.; Indianapolis 1, Ind.; Los Angeles 5, Calif.; Minneapolis 3, Minn.; New Orleans 16, La.; New York 17, N. Y.; Norfolk 2, Va.; Seattle 1, Wash.

TEXACO FUEL CHIEF HEATING OIL

had before. The stack temperature now is so low, and comes up so slowly following starting of the oilburner, that we get nuisance, shut-downs "on safety." All that's needed is re-setting of the stack control, but that on top of cold apartments and no hot water can get annoying? So . . . what do we do now?

U. C. B., Baltimore, Md.

A. If the heat-sensitive, bimetal element of the stack control is ten years old (we gather from your letter it may be), perhaps all that's needed to end this borderline trouble is replacement of this old element, which has grown weak and tired. After all, the burner is stopping "on safety," you say, only about once a week.

To end the trouble definitely, replace the heat-sensitive element of the stack control, and also move this control to a flue-door location where it will be affected by hotter products of combustion. Drill a test hole in the flue clean-out door first, and use your stack thermometer to make certain that gases no hotter than 900°F. will surround the heat-sensitive element of the stack control, with this control at its new location.

Q. Attention Mr. J. W. Schulz: I have a customer who has a boiler with a "Free Heater" or "Stack Heater" attached. Please give me some ammo to convince him the thing is no good.

I know about the smokepipe economizers which recently got the UL *label* OK, *and I know about the feature of the power-driven soot cleaner. But this job has one of the originals, and it ain't worth a Tinker's Damn. I'll be darned if I can convince my customer, who is a farmer, that it is worthless. I need some one-syllable words to tell him why. Last summer he bought the house with the "Free Heater" already installed. We refuse to take the job on a comprehensive service contract. I need to make the customer see the light.*

A. G., Northport, N. Y.

A. First, although you obviously are anxious to continue doing business with this customer and servicing his oilheating equipment, you will not compromise about his continued use of the smokepipe equipment you describe.

Secondly, nearly all the fueloil suppliers and service organizations in your locality agree with you in condemning the use of such smokepipe equipment as you describe.

Third, you can cite local ordinances which on grounds of safety do not permit the use of such equipment.

Fourth, oilheating equipment which such a customer is using in his home should be safe according to the requirements of the UL—but your customer is using a major piece of equipment that is not safe on this basis.

Fifth, the overall poor performance of such equipment as you describe, on thousands of installations of which many have been studied closely, has deservedly won it the poor reputation reflected by the preceding points.

Sixth, according to certain experts in the field of the design and performance of oilfired furnaces and boilers, the accumulation of a deposit ⅛" or ¼" thick on heating surfaces (on the indirect surfaces of flues, for example) should not subtract from the dependability of the operation of an oilburner.

Over the past year, dealers have been quick to accept the new low-cost Honeycomb Filter Tube. Now . . . a new combination of materials has made this tube even better. The *new* Honeycomb Filter Tube features an improved film of fibre napping across hundreds of filtering tunnels. You are now sure of the ultimate in protection against oil burner failure due to oil impurities.

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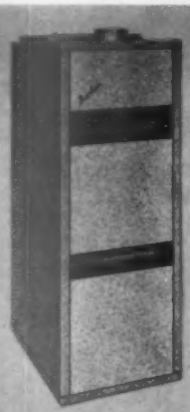

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remote, self-contained and plenum systems.
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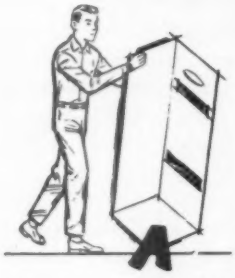

Burnham builds with your profits in mind. These modern Winter Air Conditioners cut installation time and call-backs way down. First, the exclusive pan bottom makes them more rigid. You walk them right into position with no fear of damage. You level them more easily. And you can skip grouting entirely. Then, once they're installed, they run right and keep on running right.

Burnham has an 86-year tradition of advanced engineering and quality craftsmanship. These units carry Burnham's 20-year Guarantee. For Summer Cooling, too, Burnham means quality that protects your profits. No wonder the new Burnham warm air and cooling line is winning such speedy acceptance! Join in the profits! . . . install Burnham.

Write today for full information on the new Burnham line!

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Accordingly, say some of these experts, a good minimum cross-sectional dimension for a flue passage, or any passage serving products of combustion, is two inches. As the piece of smokepipe equipment you refer to has flue-passage dimensions absurdly small according to this two-inch minimum principle, and does not have the motor-driven soot cleaner you know about, these experts declare that to install the equipment you describe invites trouble in a big way. The soundness of the preceding ideas has been demonstrated fully and unquestionably on thousands of installations.

If citing the preceding six points does not convince your customer, permit him to observe for himself what happens as the result of using the smokepipe equipment he has. Under your supervision, he should take apart his "Free Heater" and clean it so thoroughly that it's as nearly like new as possible. Four months later in the heating season, he should take it apart again to examine its innards. What he sees for himself should convince him!

HAGO PRODUCTS

1120 GLOBE AVE., MOUNTAINSIDE, N. J.

***IN CANADA* — RICHARDSON, LTD.**

1169 Caledonia Road, Toronto

Q. We need assistance in designing an oil conversion for a maple syrup evaporating pan. We tried to get the evaporator manufacturer to help, but it is a very small firm and either does not know or will not cooperate.

This pan boils down about 385 gallons of sap per hour when fired with soft coal. On this basis, I assume it should be fired 5.0 to 6.0 gph. Perhaps you can confirm this.

Our major problem is the combustion chamber design, to produce even boiling over the width of the pan. This pan is seven feet long by forty-four inches wide. It has a stack at one end and a grate 44" x 48" at the other end. Below the grate is an ash pit 10" deep. Distance from the grate to the crown sheet is 32". The flue pass to the stack is 10" high, and is the full width of the pan.

I assume that considerable over-fire baffling would be needed plus some firebrick spaced in the large flue pass to act as baffles. Can you help us with more specific design information?

J. A. C., Gouverneur, N. Y.

A. Your letter does not make clear the position of the 44" x 48" grate with relation to the evaporating pan. This grate may be in front of the pan, considering the stack to be at the rear of the pan, with the result that radiant heat from the burning coal does not reach the pan. The crown sheet 32" above the grate would not be pan surface. If this arrangement is used, fierce radiant heat from the burning coal does not reach part of the bottom of the pan, and heat this part greatly—perhaps overheat it with relation to other parts of the bottom of the pan, which do not receive radiant heat from the burning coal. This arrangement tends to heat the entire bottom of the pan uniformly, although of course the front of the pan receives more heat from the burning coal than the rear of the pan.

The other possibility is that the 44" x 48" grate is directly below the front part of the pan, with the result that radiant heat from the burning coal does reach and heat greatly the pan area directly above the grate. If this arrangement is used, the heating of the pan is far from uniform now, with the result that in converting the set-up

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IBM® DATA PROCESSING

to oilfiring you can improve greatly the uniformity of heating the pan.

You can consider building a self-contained combustion chamber in front of the pan. Having a "ceiling" as well as four walls and a floor, this will be filled with a flame that provides complete combustion. Checked with instruments, the products of combustion leaving the flame should show high CO_2, above 9% and preferably up to 11%, and a low smoke-instrument reading of No. 1 or 2. The products of combustion can leave the self-contained combustion chamber through horizontal slots in the rear wall of the chamber, possibly but not necessarily high in this wall. Then these products of combustion can flow under the pan to heat it and its contents.

If you install a gun burner that can give a wide flame, suitable dimensions for the firebox may be 27" wide, 27" long, 9" nozzle height, and 30" minimum side wall height from firebox floor to "ceiling."

Because the combustion chamber does not have heat-absorbing direct heating surfaces of the kind in usual furnaces and boilers used for heating, and because the firing will be continuous for long periods on this installation, build the combustion chamber of industrial refractory material able to withstand extremely high temperatures. To build the "ceiling," use arch brick and the special design and construction methods used for industrial boilers. The floor and sides of the flue passage under the pan should be lined with insulating firebrick able to withstand high temperatures. Provide the kind of baffles you have in mind, to spread out the red-hot products of combustion that enter the flue passage, under the pan, and to insure uniform heating of the pan on a sidewise basis.

The passage through which red-hot gases leave the self-contained combustion chamber (through the horizontal slots already described) will start out the width of the firebox, but gradually will increase to 44", the width of the pan. One or more firebrick baffles near the center of this passage can be used to spread much of the products of combustion to the bottom of the pan.

An electronic primary control system is best for such a burner; it can have a flame-monitoring device in or close to the gun tube.

Firebox is important

Make up detailed plans beforehand, and have them studied and approved by the manufacturers of the oilburner and the refractory material you will use. The construction of the firebox is extremely important; to avoid heartaches (great expenses for maintenance, and even falling down of the "ceiling"), the firebox really should be planned only by an expert in the field of the commercial-industrial use of refractory material.

Although 6.0 gph may be a high enough firing rate, the dimensions given here for the firebox will permit firing up to 8.0 gph.

Provide a large flame-observation door, having minimum opening dimensions of 14" wide and 10" high, above the gun tube or (better) in the side of the self-contained combustion chamber. A cast-iron door and frame from a discarded boiler is suitable for this. A slab of bolted-together insulating

NOW-A BETTER FIREBOX

JM

CERAFELT®
REFRACTORY FIBER FELT

Can be installed in 30 minutes
Ideal for new or replacement jobs

•

Made for Sid Harvey's by Johns-Manville

EASY

No bricks, no cement, no mixing, no mess, no clean-up. A sharp knife, snips and screwdriver are the only tools you need.

CLEAN HOT FIRE

CERAFELT® fireboxes heat up in seconds, and cool off just as fast. Provides maximum efficiency, quiet operation and prevents nozzle coking.

LIGHTWEIGHT

Complete kit, felt and steel enclosure, comes in a compact roll, weighs about two pounds.

TWO SIZES

CERAFELT® kits come in two sizes 12" and 16" high. Maximum firing rate up to 1.75 GPH.
Used to make round, oval and pear shaped fireboxes or may be installed inside existing firebox.
Try one on your next job.

SID HARVEY INC.
VALLEY STREAM NEW YORK

AVAILABLE AT ALL 42 SID HARVEY STORES OR BY MAIL

Your Choice . . . SQUARE . . . OR NEW ROUND

Windmaster® Draft Control

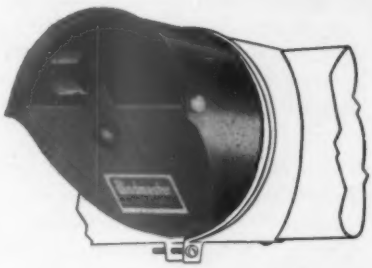

Photo of new round draft control
Line drawing illustrates adapter

both have
WINDMASTER
Performance-Proven
and
Time-Tested
45° Vane

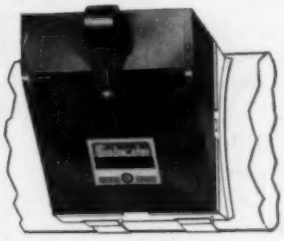

Photo of square draft control
Line drawing illustrates adapter

New, competitively priced, round Windmaster Draft Control fits snugly, quickly to save installation time . . . can even be installed directly in 'tees'.

45° Angle Mounted Vane — With angle mounting, the Windmaster vane eliminates that ineffective, quivering first 45° of movement . . . assuring quicker relief right when it is needed.

Calibrated Weight—Stack draft calibrations on the weight permit quick, accurate draft adjustment right on the job, with no factory setting to take for granted. It makes setting of the overfire draft with a draft gauge easier.

For Quiet, Efficient, Trouble-free Draft Control, Select Windmaster for every Heating Installation. Write us today for our new low prices.

CHECK THESE EXCLUSIVE WINDMASTER ADVANTAGES:

- 45° Vane — no nervousness—faster response
- Large Vane — more effective area
- Permanently Silent Non-Rusting Nylon Bearings
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- ☐ Interoffice Correspondence
- ☐ Heating & Burner Material
- ☐ Survey Sheets
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- ☐ Inspection Information
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My Name .....

Company .....

Street .....

City .....State .....

DEGREE DAY SYSTEMS
39-30F 58 ST., WOODSIDE 77, N. Y.

firebrick should be placed on the fire side of the door, as without this the door will become red-hot.

Consider using a twin nozzle-adaptor and two nozzles in the burner to permit using a lower nozzle height than has been suggested, to gain better atomization than one large nozzle gives, and to achieve a flame that's short and bushy. Some dealers would use two side-by-side gun burners, each having twin nozzles, to fire a short firebox that's as wide as the 44" width of the pan.

Q. What adjustment is necessary if oilburner is smoking?

S. R. J., Philadelphia

A. The following causes for inability to produce high CO_2 readings without smoke are also the causes of chimney smoke: 1—Burner's air damper should be opened wider; 2—Air leaks in furnace or boiler are lowering the flame temperature; 3—Firebox is poor with respect to design or construction or condition; 4—Excessive over-fire draft; 5—Burner is producing a flame of the wrong shape for the firebox, or firebox is the wrong shape for the only shape flame the burner can produce; 6—Poor atomization—a pressure burner needs a new nozzle or higher atomizing pressure; 7—Inferior fuel-oil; 8—Furnace or boiler is greatly underfired or overfired; 9—Oilburner is of poor design; 10—Burner's blower wheel is clogged with dirt and dust, thus needs cleaning; 11—Burner is in a small, tight room which needs an opening to admit outside air; 12—Plus pressure over the fire, instead of negative draft—caused by plugged furnace or boiler flues, or a smokepipe or chimney which is plugged or defective or afflicted with other shortcomings; 13—Oil flame is larger than the burner model can produce without smoke; 14—Air passages in the burner's air-handling parts, in the gun tube, are plugged with carbon or dirt and dust.

After you have diagnosed the trouble properly, you should be able to match it with a remedy.

You will find much help in two books, "Better Oilheating," and "Installing the Domestic Oilburner." Avaiable from FUELOIL & OIL HEAT, each is priced at $2.

Congratulations on giving us the shortest question which we received in the more than 25 years we have been publishing this department!

Q. Following advice given in your magazine, I acquired a complete combustion-test set. I use it on all my installations, and the improvements I make as the result often cut fueloil consumption by 15% to 30%. I have one problem. One little burner, firing .65 gph, has a round hole 1" in diameter that remains open, letting room air into the burner's blower, when the air-adjustment damper is tight closed. So much air goes through the 1" hole that I can't get the CO_2 reading above 7½%. I'm told the hole is there for safety, so that a man can't shut off the flow of air to the firebox entirely.

I. C. M., Marshalltown, Ia.

A. Close the 1" hole partly or entirely, using a piece of sheetmetal neatly bolted in place. You are justified in doing this, as the open hole provides the flame with too much air, and so wastes fueloil.

equip for the BOOMING 60's

Viking Truck Mounting Pump
35 - 50 - 90 - 150 - 200 - 300 G.P.M. Sizes

install Viking Pumps now!

Are you looking ahead to peak production? Will your pumps be operating full time, returning your investment, through the 60's . . . or will they need service and replacement?

You can depend upon VIKING POSITIVE DISPLACEMENT PUMPS to return your investment . . . to stay on the job . . . to give you FAST priming, strip your tanks if desired . . . to move thin or viscous liquids without excessive turbulence.

Read these actual statements from Viking Pump users—solid proof of top performance.

"My Viking fuel delivery pump has outlived two trucks."
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Look ahead to the 60's! And look to Vikings for profitable operation. Send today for catalog GEE.

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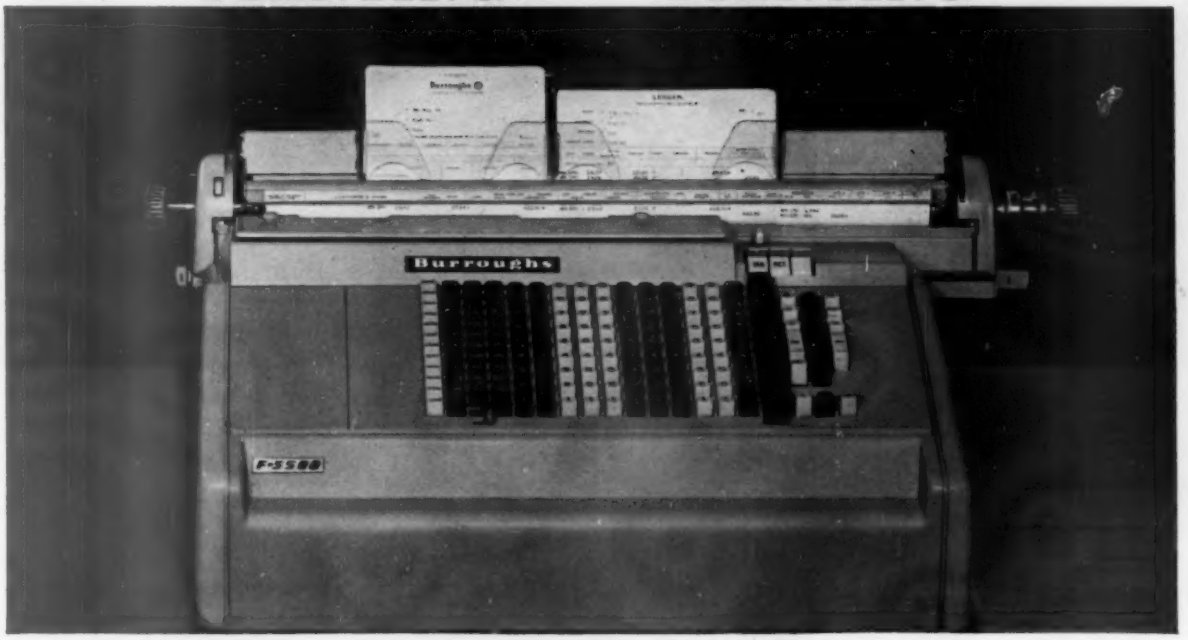
NEW BURROUGHS F-5000 FIRST FULLY AUTOMATIC ACCOUNTING MACHINE WITH DUAL PRINTING



Now dual printing is combined with fully automatic accounting! With Burroughs new smartly styled F-5000 Dual Printing Accounting Machine, there are no extra operator decisions to make and no extra keys to punch. The machine prints identical figures—simultaneously—on two original records. Balances are automatic without key depression. And you get far greater flexibility to help you handle more accounting jobs faster. Here's why:

NEW SPEED: Faster printing time speeds machine operation, which is 100% automatic. 33-1/3% reduction of posting cycle shrinks work time considerably. NEW FLEXIBILITY: Dual printing is applicable to a wide range of jobs. Programming capacity is increased up to 100%. Memory capacity is fully utilized.

Weigh these merits, together with the F-5000's keyboard input and 252 digit memory, against your accounting jobs—payables, receivables, payroll, ledger statement with distribution, and utility billing, to name just a few. For full details just phone our nearby branch office. Or write to Burroughs Corporation, Burroughs Division, Detroit 32, Michigan. Burroughs—TM

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from .50 to 30.00 gph in light oil
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Several territories still open for qualified manufacturers agents

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Fueloil & Oil Heat's
OIL HEATING Service Managers JOURNAL
NATIONAL ASSOCIATION OIL HEAT SERVICE MANAGERS

Service Departments contribute much to the oilheating industry's Future

by Arthur H. Lipson*

A HIGHLY CONTROVERSIAL subject has sprung up in our industry and it seems that the service departments are supposed to have the answers, and the correct ones at that.

The subject: Why are so many new homes being built with gas equipment and why do users of oil heat consider gas replacement equipment when their present oilfired units wear out? The answer to these problems, and that is exactly what they represent, can be answered but not in just a few words.

Builders feel that gas heat is more economical for them to install; they get a greater allowance on other gas appliances and the gas company representatives are nice people to do business with at all times. The oil industry has become complacent, lethargic in its selling approach. The attitude of getting in and out of the house with a fast profit is uppermost in the minds of most installers of oil heat, not all but many.

Much of the poor installation work can be laid at the foot of the contractors who install both plumbing and heating. They know little about oilburners, mounting controls, building chambers, etc., but because they submit a low figure for both plumbing and heating, the heating contractor or independent oil supplier is priced out of a job and cannot compete. And, he should not compete at these low prices. The installer of this equipment does not render service so it becomes the headache of the fueloil dealer.

As for the replacement market, whenever an oil tank leaks, it means a possible convert to some other form of fuel. Insurance might help but it doesn't erase the memory. Let us get tanks that last and last and last.

True, on the other side of the ledger there are gas explosions and this does cause setbacks but amazingly enough, they generally are inconsequential.

And what about the oilburners now in use? Pick out a successful fueloil dealer and you will observe that he has a systematic approach to the replacement of obsolete or tired equipment. A sales staff trained to evaluate the needs, advise wisely and approvingly is a prime requisite in this successful organization. It leads to prop-

*Lipson's Oil Co., Boston, Mass.

NEW LOW COST HIGH POWER VACUUM

New hidden, patented filter*

—3 times more power

The new Premier Model P-950 Vacuum, with the new hidden, non-clog filter, is the only true low cost furnace cleaner. The hidden filter gives you more usable capacity than other vacuums twice the size. You can clean 4-5 home furnaces without emptying. Yet it is so small it fits easily on the floor of your car. Over 2000 in use. Other models range from 16-48 qt. usable capacity, including 3 in 1 units: wet or dry, blower or shoulder vac.

*patent number 2814357

Model P-950

THE PREMIER COMPANY
Dept. 501, 755 Woodlawn Ave., St. Paul 16, Minn.
In Canada: 35 Gerrard St. West, Toronto 2
Attention: Gordon L. Bowman, V. P. & Sales Mgr.
Please rush me FREE details on Premier Heating, Air Conditioning and Industrial Vacuums. Thank you.

For FREE illustrated information fill in and mail request form today.

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COMPANY_____
ADDRESS_____
CITY_____STATE_____

When service is your business

MOTOROLA 2-WAY RADIO MAKES THE DIFFERENCE

Motorola 2-way radio keeps you in *constant* contact with every vehicle . . . beams drivers *directly* to the nearest job . . . or reroutes them for an on-the-way pickup. It gives you control and maneuverability never before possible.

Mobile radio control eliminates the costly time your drivers waste, parking, waiting and phoning-in. Motorola 2-way radio pays for itself, saves the out-of-pocket cash you're spending on wasted gas, oil and vehicle wear for unnecessary "dead heading" and backtracking.

Because you can deliver *better* service at *lower* cost and get in *more* calls each day, you gain a strong competitive edge over conventional "phone-in" firms. To get the *most* for your money, you'll want the radio that gives you the lowest operating cost and highest reliability. That's what you get with Motorola 2-way radio—job-proven in tens of thousands of applications. And with nearby factory-authorized service, you are assured of continuing peak performance. Write or call for full facts today.

Motorola . . . the communications specialists for industry

MOTOROLA 2-WAY RADIO

Motorola Communications & Electronics, Inc., 4501 Augusta Blvd., Chicago 51, Ill.,
SPaulding 2-6500 A Subsidiary of Motorola Inc.

erly installed burners rated for the job.

We need selling in this industry. Selling ourselves in our own future, before we even contact the customer. Our servicemen need schooling in two departments. Faith in the industry and themselves and in their own knowledge of oilburner service. Many have not kept abreast of new models and the many modern controls that have been placed on the market. Schools training these men are important, but it is often said that schooling first starts at home. Let us give the serviceman something to be proud of, not just an eight-hour job but a highly skilled profession.

Maybe when he goes into the home of a customer, he will do so with an air of authority and not only appear to know but actually will know how to make the job right. Not a halfway, temporary repair but a complete, thorough and professional job.

Home heat councils and advertising expenditures are fine and serve a most useful purpose and therefore deserve mention but the burden of proof is on the service departments everywhere.

Names in the News

(*Begins on page 12*)

Harry J. Case has been appointed manager, Residential Climate Changer Sales, The Trane Co., LaCrosse, Wis. Case, former manager, jobber sales, succeeds *William Lindsay*, promoted to manager, packaged equipment sales. Climate Changers are central units that can include both heating and cooling equipment.

George C. Scribner has been made assistant sales manager, Vulcan Electric Co., Danvers, Mass., responsible for internal sales administration in addition to field liaison. He will assist L. A. Brett, sales manager. Scribner formerly was with Tuttle and Bailey.

William W. Simons has been promoted to applications engineer, Milwaukee Valve Co., Milwaukee, a subsidiary of Controls Company of America. He will specialize in product application activities with oil companies, tank truck builders and oil marketing equipment dealers.

Regis L. Plante has been named general sales manager, Troch Bros. Fuel Co., Chicago. He has had long experience in heating industry including service with Oil-O-Matic, Iron Fireman Co. and more recently Braun Bros Oil Co. Currently, he is president of the Chicago Oil Burner Association.

Harry G. Cross, chairman of the board, The Waterman-Waterbury Co., Minneapolis, Minn., died on July 2. He had been ill for some time. Ray J. Dervey, president, in paying tribute to Cross said that the company will continue to maintain the principles and policies that Cross had initiated.

Samuel E. Charlton has been made manager of the Pennsylvania sales division, Esso Standard Oil Co., New York. *DuVal F. Dickey* will move from a post in New York to become assistant manager. The former district manager, *J. F. Dixon*, has an assignment in Sweden with another affiliate of Standard Oil Co. (N. Y.).

STOP
OIL ODOR
USE
NEUTRODA
SPRAY or POWDER
The 'ORIGINAL' Fuel Oil Deodorant
SPRAY
WHY BUY LESS THAN THE BEST!
• Works FASTER in Banishing ODORS.
• More Concentrated... Requires LESS.
• Customer gets MORE for his money.
NON-FLAMMABLE — NON-TOXIC
A little NEUTRODA on furnace filter — kills objectionable odors.
POWDER IN HANDY SHAKER
THE TANKIT COMPANY, Inc.
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FINENESS AND CAPACITY COMBINED
IN COMPACT SIZE!
SETTE
MICROSTONE® ELEMENT
FILTERS
MODEL MS-3 — Handles 100,000 BTU's, installed at tank or anywhere on line for medium to large oil burning units: much greater than other filters of similar size! Exclusive Microstone ceramic element traps all foreign matter to 1/10,000th of an inch — easily cleaned for re-use. All aluminum construction; easily disassembled without special tools; built-in shut-off valve and air vent; inlet and outlet ⅜" IPT. And the cost is low! $4.80 EACH
MODEL MS-3E — Even lower initial cost! Same basic construction as Model MS-3, but without shut-off valve and air vent! A real low-cost attraction! $4.00 EACH
SEE YOUR JOBBER — OR ORDER DIRECT! If he cannot supply you we ship postpaid anywhere in U.S.; normal discount in dozen lots.
SETTE PRODUCTS COMPANY
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Please send the following, postpaid:
_____ doz. Model MS-3; List $4.80 ea.
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Each of the 8 Red Seal meters at this big terminal can load 650 gal. per min.

Dual meters solve problems of handling two fuels with one 1500-gallon truck.

from big terminal in Kansas . . . to tank truck in Wisconsin

3-DIMENSIONAL ACCURACY

is the all-important factor in selecting meters

Imagine 20 million gallons of gasoline billed through just one meter in one year! You're looking at it in the photo above. And this is not unusual . . . a busy meter handles more than you think.

It's a powerful reason why *accuracy* is the one most important criterion in buying meters. This goes for loading-rack meters and tank truck meters *both*. Accuracy is far more important than a cheaper price tag or lower loss of head, for instance. Think how much profit your *own* meters, big or little, could lose if accuracy slipped even a fraction of a percent.

Make sure you get true *three-dimensional* accuracy in your meters. Look for (1) accuracy at the most frequent flow rate (most meters can do this); (2) accuracy that's steady over *a wide flow range* (this is harder to find) and (3) accuracy that's sustained over many years . . . accuracy that doesn't drift every time you turn your back (Neptune has it).

Neptune's fine reputation and leadership is based on *true* three-dimensional accuracy. Make your own tests over the years. Ask your neighbors, or ask your Neptune representative for evidence.

Neptune's accuracy is something you can bank on.

NEPTUNE METER COMPANY 19 West 50th Street, New York 20, N.Y.

neptune

for a better measure of profit

P. C. Heinsohn has been appointed manager of the eight-state southeastern division, with headquarters in Atlanta, by Sinclair Refining Co., New York. He succeeds *E. J. Bassett* who has moved to Kansas City, Mo., as vice president and general sales manager for the western region. *F. A. Sheriff, Jr.*, has become assistant manager of the southeastern division.

Bryant-Hedback Co., Indianapolis, Ind., appointed distributor in the area by Lima Register Co., Lima, O.

Hagle Sales, Inc., Winter Park, Fla., named Florida sales representative for International Heater Co., Utica, N. Y.

Charles W. Krause has been promoted to general sales manager, Neptune Meter Co., New York. Succeeding him as eastern regional sales manager is *James C. Judge*, formerly in charge of the Portland, Ore., office. *G. W. Moore* has been named Philadelphia district manager and his former territory in upstate New York is now being handled by *John J. Moran*.

Eastern Theatre Supply Co., Inc., Buffalo, N. Y., named representative for RCA mobile communications equipment in the Northwestern section of the state, by Radio Corp. of America, New York. Also named *Electronic Specialty Co.*, Charleston, W. Va., assigned the western portion of West Virginia.

M. F. McMeel will be in charge of heating control sales to distributors, Appliance Control Department, General Electric Co., Morrison, Ill. He will be responsible for more than 100 distributor service centers and will coordinate the efforts of a staff of 21 service specialists located throughout the country.

Harold A. Lockhart, vice-president in charge of engineering, Bell & Gossett Co., Morton Grove, Ill., was honored recently for his 25 years of service with the company. He joined the company in 1934 as a member of the engineering staff and was elected a vice-president and member of the board of directors in 1953.

George W. Beam has been named to the new position of merchandising manager, Richmond Plumbing Fixtures Div., Rheem Mfg. Co., Metuchen, N. J. He will be in charge of advertising, sales promotion and field marketing programs. His heating industry background includes experience in distribution as well as manufacturing.

Clement J. Arri has been named district sales manager for eastern Missouri, central and western Illinois, Heating and Air-Conditioning Division, Stewart-Warner Corp., Lebanon, Ind. *William G. Schanck* also becomes a district sales manager in Connecticut and southern New York State.

Dr. John M. Colonas has joined Pullman Vacuum Cleaner Corp., Boston, as vice-president in charge of engineering. His past business associations include positions with Commercial Filters Corp. and M. W. Kellogg Co. He will supervise engineering and design of all Pullman products.

Stop Oil Leaks!

WITHOUT DOWN TIME and with UNIT in SERVICE!

Users' Reports Tell How OYLTITE-Stik can help you

". . . to make instant repairs on basement storage tanks . . . a great time saver."
A New York Oil Distributor

". . . on seams of large oil tanks where weld was not perfect."
A Wisconsin Fuel Company

". . . we punched a hole in the tank with an ice pick, then filled the tank and plugged the hole with the oil running out; it held for months."
A Maryland Contractor

". . . to seal small holes of oil storage tanks, created through condensation."
An Illinois Contractor

". . . has done such a good job we do not want a service man to be without one."
A Pennsylvania Heating Company

". . . to repair leaks in domestic tanks inaccessible for repair by other methods . . . most satisfactory."
A Canadian Contractor

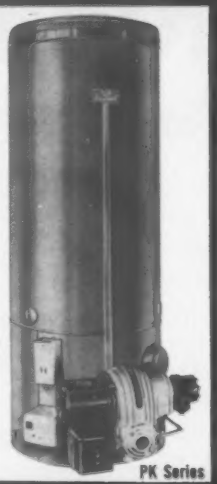
OYLTITE-Stik is one of the best time-savers and trouble-stoppers you can find.

• See your suppliers for OYLTITE-Stik or write direct on company letterhead for free sample.

LA-CO LAKE CHEMICAL CO.
3086 W. Carroll Ave., Chicago 12, Ill.

NEW! *Radiant* Glass Lined WATER HEATERS
(Direct Oil-Fired)

FROM CARTON TO INSTALLATION IN ONE EASY STEP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Completely Wired!
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It's a Completely Packaged Unit Ready for Installation!

FEATURES:
- 10 Year Guarantee
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- High Temperature Combustion Chamber
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- Fully Insulated Tank
- Complete with RADIANT Oil Burner and Controls
- Other Series Available from 300 G.P.H. to 6000 G.P.H.

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SINGLE OR DOUBLE TIER RADIATION
SOLVES ALL HEATING REQUIREMENTS

Hoff PANEL LINE
HIGH OUTPUT . . . HANDSOMELY STYLED
BASEBOARD RADIATION

FREE-STANDING OR RECESSED

Rust-resistant electro galvanized steel. Full collar non-ferrous heating element. Snap-on accessories. Panels in 3, 4, 5, 6, 8 ft. lengths.

SINGLE TIER

For normal applications when heating requirements are at a minimum and sufficient wall space is available.

DOUBLE TIER PARALLEL

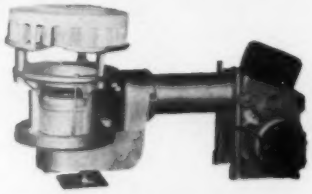
For cold climates where heating requirements are high. Also for bathrooms, kitchens and playrooms with limited wall space.

DOUBLE TIER SERIES

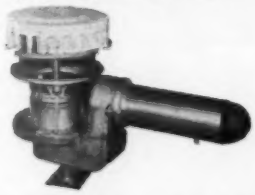
Equally effective as parallel, with additional advantage of returning to boiler or main without looping back under floor . . . essential where returning under cement slab floor is not practicable. Particularly suited for converting from old hot water or steam systems to baseboard.

Hoff MANUFACTURING CO.
BETHANY, CONN. MEMBER I-B-R
WRITE FOR LITERATURE AND INSTALLATION DATA

"OILGAS" *The most advanced and economical method to burn fuel oil*



OILGAS BURNER UNIT
Thrifty—Simple—Trouble Free



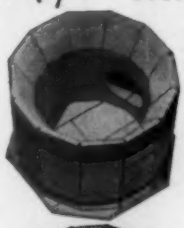
MODEL A .75 to 1.50 GPH
"OILGAS COMBUSTION HEAD"

Converts fuel oil to gas with primary air at 400°F and secondary air at 900°F. No combustion chamber required. Has no moving parts or electric heaters.

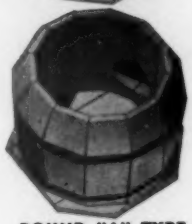
VIGNERE OILGAS BURNER & MFG. CO.
P.O. Box 416 New Castle, Penna.

I give Expert Service and I use . . .

The Instant-Ylo
CUSTOM-BUILT INSULATING BRICK
COMBUSTION CHAMBER



STANDARD ROUND TYPE
for Boilers
and Cast Iron Furnaces
Sizes up to 2.0 GPH



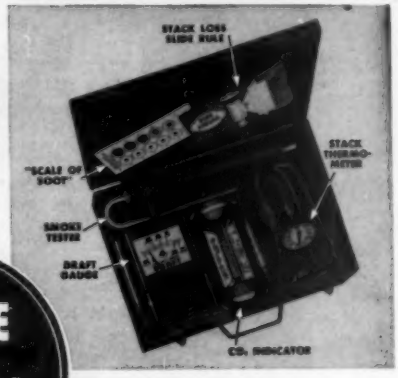
ROUND "A" TYPE
Specially designed for
Steel Furnaces
(Can be used on any job where round chamber is desirable.)
Sizes up to 1.75 GPH

"NARROWBOY"
for Narrow Boilers
and Furnaces
Sizes up to 5.0 GPH

"My Customers appreciate the DIFFERENCE!"

For details, write to:

BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Div.
7-17 WILLOW STREET
LYNN, MASSACHUSETTS



FYRITE UTILITY KIT

... PACEMAKER FOR PROFITS from Expert Tune-up Service

Making the most of your ability to do an expert tune-up job will pay you big dividends in gaining you competitive leadership and neighborhood recognition of your competence as a heating expert. The combustion-testing kit shown here contains precision-made quality instruments with which you can make fullest use of your know-how in making a fuel conservation survey, checking a burner for wornout parts and needed repairs, or running an efficiency test to close a replacement deal.

The kit contains the well-known FYRITE CO_2 Indicator, the versatile MZF Draft Gauge, the all-metal TEMPOINT Stack Thermometer and the sensationally new TRUE-SPOT Smoke Tester. Now, for the first time, you can adjust an oil burner quickly and expertly for highest CO_2 without objectionable smoke . . . do away with guesswork, and "hit and miss" fumbling in adjusting for clean firing. The "Scale of Soot" which comes with the TRUE-SPOT tells you the limits of permissible smoke for various burners and types of heating systems. This amazingly simple method of oil burner adjustment is the greatest advance in combustion testing since the introduction of the FYRITE. You will be proud to be among the first to own this "up-to-the-minute" combustion-testing kit.

For complete information on this and other new tune-up equipment—write for Bulletin 777

BACHARACH INDUSTRIAL INSTRUMENT COMPANY
200 N. BRADDOCK AVE. • PITTSBURGH 8, PA.

THIS NEW LOW-COST FUEL USE COMPUTER

cuts your oil delivery costs—eliminates degree day calculating

There's no complicated calculating needed with the new low-cost *direct-reading* Fuel Use Computer. You're able to tell at a glance the amount of fuel consumed each day by your customers—able to schedule your deliveries to get more profitable use out of your trucks.

How does the Fuel Use Computer work? The rugged, easily installed roof-top measuring unit *continuously* relays the weather around you right to the compact recording unit on your desk. All you do is glance at the direct reading dials for the average fuel use at any time. The recorded "weather units" are displayed on four easy to read registers which indicate fuel oil use for customers who combine house and hot water heating as well as for those who heat house only. What could be simpler?

Just Check These Cost-Cutting Features

- Far Less Clerical Work—And You Use Your Present Card System
- No More Run-Outs—More Use Out of Your Trucks
- Easy to Read—You read "weather units" right off the dials
- Simple to Install—And Maintenance-free
- Safe—low voltage roof units

For more information on how you can cut your oil delivery costs with the new Fuel Use Computer, write today. 1906

HRB SINGER **HRB-SINGER, INC.**

90 Schureman Street New Brunswick, New Jersey

A Subsidiary of The Singer Manufacturing Company

Truck Talk

(*Begins on page 100*)

The best way to get more mileage out of those truck tires is to take better care of them. The B. F. Goodrich people pass on some healthy tire tips. The first is: Keep tires properly inflated.

Overinflation is one of the greatest causes of tire damage.

Overinflation leads to: rapid wear in the center portion of the tread; increased tendency toward bruises and impact breaks; excessive strain on beads and rim; abnormal tire growth, stretching of tread and tread cracking; abnormal stresses and strains in the tread that lead to separation; more cuts and snags; harder riding and reduced cushioning leading to increased upkeep costs on equipment; reduced traction and skid resistance because less tread contacts the road.

Underinflation is almost as bad. Tires are designed to operate at certain recommended inflations which provide normal flexing with proper deflection and road contact. Underinflation leads to: tread wear on shoulders; irregular tread wear; excessive heat causing ply separation; increased tendency to bruise and tread separation.

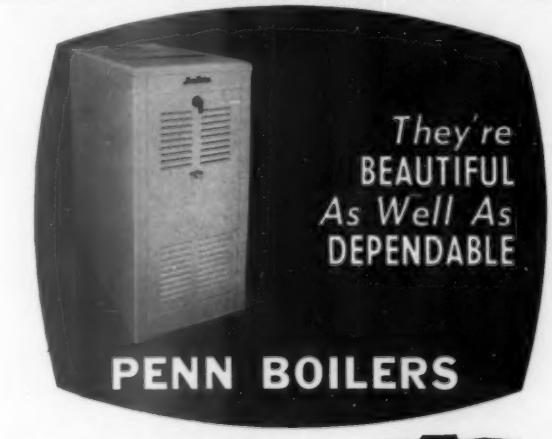
For best tire wear, inflate to recommended pressures when tires are cool. Check pressure regularly. Tighten valve caps, catch slow leaks. Lower tire pressure if your load is continually below maximum. Never bleed tires to relieve build-up. If excessive build-up occurs, either load or speed or both must be reduced. Use the type and size tire with capacity for your load.

Safety is not a campaign or a promotion. Safety is a state of mind. Men can be trained to think safely by constantly being reminded of safe work and driving habits. That quote is good enough to put on your bulletin board.

Down in Atlanta, Ga., a transit company is sending each of its drivers to Red Cross first aid courses. The company also equips each of its trucks with a good sized first aid kit. The move has given the drivers a lift, and furnished the company with a tremendous local shot of good will and publicity. Give you any ideas?

LOWEST PRICE TAG ON ANY CIRCULATOR

Check the figures: You pay less for a Fostoria 400A than any other standard water circulator. But you still get performance and features the others can't touch. The seal-less 400A needs no lubrication, no starting device. It can be installed in any position—serviced with only a screwdriver. Use the 400A for circuits or zones to 90,000 BTU. Two-year warranty. Write for information to Fostoria Pressed Steel Corporation, Pump Division, Fostoria, Ohio.



Boilers must be dependable . . . and Penn Boilers are backed by over a quarter-century of dependable performance. In addition, today's Penn Boilers have the good design, the careful finishing that makes them easier to sell to today's discriminating buyers.
Package units with all components and controls, including motorized comfort zone valves. Gas and oil fired.

See your distributor . . . or write direct for literature

PENN BOILER AND BURNER MFG. CORP.
Sales Office: 95 Empire St., Newark, N.J.

NEW MARKET

Autopulse has been vigorously promoting Lifters for mobile homes since August, 1958. Consistent advertising started then, and is continuing. It appears in:

TRAILER TRAVEL
MOBILE HOMES
TRAILER DEALER
TRAILER TOPICS
TRAILER PARK MANAGEMENT

No other Lifter line gives its dealers this kind of support. No lifter but Autopulse is getting known in this brand new market.

Cash in — with Autopulse! Write for full information.

Electric
AUTOPULSE
Division
WALBRO CORPORATION
Cass City, Michigan

Fueloil management Study

(*Begins on page 61*)

ion of all reporting distributors that oil heat is 9% cheaper than gas heating across the nation. The only real exception is in the Midwest where gas costs 12% less according to the figures sent in. There is another small exception with the Pacific Northwest companies estimating gas 2% cheaper in its larger cities.

In other columns of this table, distributors estimate the ratio in their individual communities between oil and gas installations in 1959. Every figure supplied here was an estimate and by itself would not be too dependable. But when you get the competitive fuel estimates of a few hundred intelligent oil men, they are authoritative.

The TABLE 23 shows the record of our gains and losses relating to other fuels. We gained twice as many as we lost. It is true that most of our gains were from coal and most of our losses were to gas, but as long as we can hold anything like the present ratio we are not being hurt in that department.

TABLE 23

We gained from other fuels 208,281*

We lost to other fuels 109,262

	LOST TO		
	Gas	*Coal*	*Electricity*
New England	6,943	114	136
Metro. New York	6,127	27	..
Other Mid-Atlantic	14,877	635	165
South Atlantic	3,197	329	1,754
Midwest	58,526	424	3,900
Pacific Northwest	6,305	28	5,775
ALL U. S.	95,975	1,557	11,730

Losses to all fuels

109,262 or 1.2% of total operating 1959
98,023 or 1.1% of total operating 1958
133,352 or 1.5% of total operating 1957
90,137 or 1.1% of total operating 1956
75,067 or 1.0% of total operating 1955
55,604 or 0.8% of total operating 1954
46,065 or 0.7% of total operating 1953
32,734 or 0.6% of total operating 1952

*See April issue FUELOIL & OIL HEAT, page 67.

In the lower part of the table we see that we lost 1.2% of the total number operating in the period covered by this study. Our greatest losses were in 1957 when they represented 1.5%. The picture improved in 1958 probably because of the business slump that caused people to buy cautiously and that included conversions to another fuel if the old equipment could be made to do.

In summary, the fueloil and oilheating industry has been developing quite a crop of anxieties, but very few tragedies. Competitive fuels have slowed but not stopped our growth rate. The general public in consumer opinion polls thinks very highly of oil heat. We are being hurt through lack of low cost equipment for the speculative new home market. But otherwise we are only having to contend with the occupational hazards common to any business . . . all the while fortified with pretty good bank accounts. It is not a business to back away from, and the outlook certainly is for fair to good profits with even a modest expansion.

❖

Richard M. Klaus has been named chief engineer, OPW Corp., Cincinnati, Ohio. He joined the company in 1953 and in 1955 was promoted to assistant to vice-president of engineering.

Branford

Model DO
5. to 14. GPH

Model J-3
.75 to 1.75 GPH

BRANFORD offers a complete line of SHELL HEAD models from .75 to 20. GPH

Before you buy your next oil burner, write us for complete information on BRANFORD BURNERS.

Branford Tank & Heating Products, Inc.
286 Howe Avenue Shelton, Conn.

Note to Contractors with Service Crews!

THERE'S GOOD MONEY TO BE MADE IN CLEANING!

Get easy extra profits in the "off-season" by offering tube and flue maintenance!

"WORCESTERize"

- BOILERS
- FURNACES
- CHIMNEYS

See your Jobber for a low-cost clean-up kit!

WHOLESALERS: Write for free catalog.

WORCESTER BRUSH AND SCRAPER CO.
Division of
MASON-WORCESTER BRUSH CO.
38 AUSTIN ST. WORCESTER 1, MASS.

Hydrovalve's CONTROLLED TENSION
TERMINALS
FOR OIL BURNERS!

It's easy

to service the hard-to-get-at Ignitors . . . because *Hydrovalve's* Controlled Tension Terminals snap on easily . . . for strong, positive connections. Never too tight or too loose.

***Hydrovalve's* CONTROLLED-TENSION TERMINALS —**

- Are made of nickle-plated spring-tempered brass.
- Have a unique double spring grip which prevents loose connections for greater conductivity.
- Save time! Wire ferrules are designed for easier crimping and positive grip to resist pull exerted during installation or removal.

***Hydrovalve's* Terminals are packed 50 to a jar.**

Remember —
YOUR OIL BURNER SUPPLY JOBBER CARRIES A COMPLETE LINE OF *Hydrovalve's* ENGINEERED FOR REPLACEMENT PARTS AND TOOLS! *See him now!*

Hydrovalve Co. 1319 Utica Ave. Brooklyn 3, N. Y. BUckminster 4-1330

it costs so little we put a thermostat in every room

COMFORT CONTROL by Eccne ZONE-A-TROL

INDIVIDUAL
room by room temperature
CONTROL

Now Comfort Control by Zone-A-Trol makes it easy and inexpensive to install individual room temperature control on any new or existing hot water heating system.

A thermostat in each room, operates a corresponding Zone-A-Trol valve installed on the supply piping to the radiation and automatically controls the temperature.

Operating on low voltage, no BX cable is required and installation is fast and easy.

cost but **$27.25** per room
(cost of Zone-A-Trol valve and thermostat)

Eccne PRODUCTS COMPANY, INC.
division of Viking Instruments Inc.
East Haddam, Connecticut

A Complete Handbook . . .

VAPORIZING
OIL BURNERS

Here's just about the best thing ever to assure top performance from all types of vaporizing oil burning equipment! Elementary enough for the trainee . . . yet with ample technical interest for the veteran. This 118-page handbook has all the basic data for solving field problems. Easy to read . . . packed with illustrations . . . fits into the pocket. (Published by the Institute of Appliance Manufacturers)

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The "Extra"
your customers will gladly buy!

A quality product by

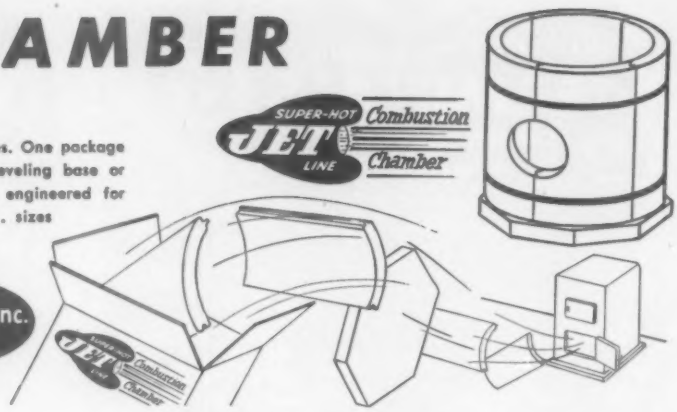
APPLIED MECHANICS COMPANY
381 CONGRESS STREET, BOSTON, MASS.

FASTEST CHAMBER

FROM CARTON TO FIRING

So fast . . . so easy to install because there's fewer pieces. One package gives you everything you need including pre-cast self-leveling base or hearth. Designed with maximum combustion area . . . engineered for more complete fuel combustion—Immediate delivery . . . sizes 6/10 to 12 gallons per hour. Write for latest bulletin.

SUPER-HOT JET LINE Combustion Chamber



a product of Grant Wilson inc.
ASBESTOS and INSULATING MATERIALS

141 West Jackson Boulevard • Chicago 4, Illinois
SOLD ONLY THROUGH BETTER JOBBERS EVERYWHERE!

Zoned forced-air Heat

(*Begins on page 76*)

circulating blower, matched to the cfm load of the zone (each unit includes also a damper, a damper motor, and a limit switch to start the oil-burner when any of the zones need heat), the warm-air furnace itself would not be equipped with the usual, large, circulating blower.

In Diag. 4, at times the entire outer jacket of the furnace will be under considerable negative air pressure, developed by one or more of the zone circulators tugging air from the plenum chamber. The products of combustion must not be able to find their way into the spaces of the furnace through which the circulated air travels; the furnace must be absolutely free of "air leaks" and "gas leaks" in its direct and indirect heating surfaces.

The outer jacket of the furnace, in addition, must be air-tight, so that dust and other particles of foreign material will not be drawn from the basement into the furnace spaces through which circulated air travels.

Working steadily at improving his ideas and their application, as a perfectionist should, Harry Giffords just recently came up with the idea of equipping each of his zone motor-damper units with its own, intake air filter of the permanent, all-metal type that needs no application of liquid adhesive (these intake filters, cleaning the air flowing to the circulator of each zone, will handle air at plenum-chamber temperature, or at only a slightly lower temperature).

One of the objectives of his designing this zone-control arrangement for forced-air heating systems, Giffords points out, is to permit forced-air heat to be zoned as easily, and positively, as forced hot-water heat can be zoned. Just as benefits come of having the proper size hot-water circulator serve each zone of a hot-water system, benefits are gained by having the proper size air-circulator serve each zone of a forced-air system, he says.

The idea of adding a highly effective water-heating coil arrangement to a forced-air furnace, as in Diag. 1, can be used to permit the furnace to carry a hot-water radiation load, the old Aqua-Air technical literature points out. With the water in fin-type radiation that's under city water pressure, the water-heating coil above the furnace can easily and simply provide summer-winter hot water, even while it serves a separately controlled zone.

❖

E. L. Wehunt, Decatur, Ga., has become sales representative for Georgia for General Filters, Inc., Novi, Mich. He formerly was a Crane Co. branch manager at Greensboro, N. C.

William A. Slack, New York 6, N. Y., is sales representative in Manhattan, New York City and Westchester County for The Rittling Corp., Buffalo, N. Y.

Barney Snyder, partner and sales vice-president, Westcott Snyder Mfg. Corp., Madison, N. J., died suddenly on August 9, at the age of 41. He had appeared to be recuperating satisfactorily from an operation following an illness that developed unexpectedly just about a week before.

SAVE UP TO 30%

ON TRUCKING AND BOOKKEEPING COSTS WITH HIDY DEGREE-DAY SYSTEM

Would you pay $95 a year rental *to save up to 30% on "your bookkeeping and trucking costs?* That's what hundreds of users of the HIDY degree-day system are saving every year. With this system you can deliver more gallons per mile—make fewer trucks do the same job. Can be bought or leased. In use in all parts of the country. The most accurate, easiest to install, simplest to maintain degree-day recorder on the market—and that statement is backed by $1000 reward for anyone who can prove otherwise! Write for full story of this money-saving, work-saving plan—ask for Bulletin 9PF. Please state whether you already operate on Degree Day system.

(Note: Some territories still available for sales representatives. Write for information.)

HIDY-BROWN RECORDER COMPANY
6988 FIVE MILE RD.
CINCINNATI 30, OHIO

FOR BURIED TANKS

You Can't Beat
FUELGUARD!

The only Remote Reading tank gauge that will fit ANY size tank . . . ANY distance away . . . WITHOUT PIPES OR WIRES!

Write for information today
R. S. TEESDALE CO.
2830 Woodcliff St., S.E. Grand Rapids 6, Mich.

There's Only One ORIGINAL

SHELL-DESIGNED
Combustion Head

An outstanding contribution to Oil Heat. Field-tested through hundreds of thousands of installations operating at peak efficiencies!

The Shell Combustion Head Does Not Cost—It Pays!

The boiler or furnace you install is no beter than its burner.

Absolutely NO SMOKE SOOT

. . . highest CO_2!

Available to Burner Manufacturers Only—

MODERN DIE & MACHINE CO.
BOSTON 25, MASSACHUSETTS

here's a tip . . .

HARSCH nozzles give a balanced spray in both hollow and solid cones . . . every nozzle individually checked for spray angle and capacity . . . easy to clean POLISHED TIP reflects heat . . . peak performance with ALL types of U.S. and Canadian fuel oils . . . plastic container stamped for size and angle.

Write today, for complete information and FREE SAMPLE on company stationery.

Manufacturer's Sales Reps. inquiries invited.
Over 25 years of successful nozzle making.

H. HARSCH & CO.
230 Tuscan Rd. Maplewood, N. J.

You Can Improve Your Selling Technique . . .

"THE SELLING MAN"

BY W. A. MATHESON

The one who reads this book, whether he is just starting or whether he has been selling for many years, can gain knowledge of sales techniques. Each hard fact is based upon tested sales principles. Only $4.00 per copy. Send remittance to:

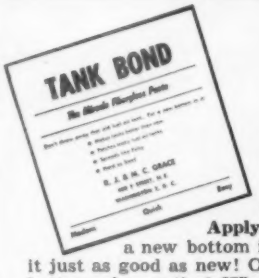
2 W. 45th St. **Fueloil & Oil Heat** N. Y. 36, N. Y.

A MOST USEFUL
TOOL
IN MAINTAINING A
SUCCESSFUL BUSINESS

SAMPLE SHEETS UPON REQUEST

THE BRADFORD PRICE BOOK
QUINCY 69, MASS.

Serving the Plumbing & Heating Trades, over a 1/3 of a century



REPAIR THAT
LEAKY
FUEL OIL TANK

. . . with the new miracle fiberglas plastic, TANK BOND. **Apply to the outside of tank**—put a new bottom in an old leaky tank and make it just as good as new! One can is enough to cover the bottom of a vertical 275-gal. tank.

$4.05 per can, or just $45.00 per case of 12 cans.

Order From—
TANK BOND
400 F St., N.E.,
Washington 2, D. C.

HAYWARD
Rotary Atomizing Burners
¾ to 12 Gph
Boiler-Burner Units
400 to 730 Sq. Ft. EDR Steam
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Boiler-Burner Units
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Write for franchise information:
HAYWARD OIL BURNER CORP.
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Branch Office:
86 Kirkland St., Cambridge, Mass.

Oilheating and Fueloil—Your

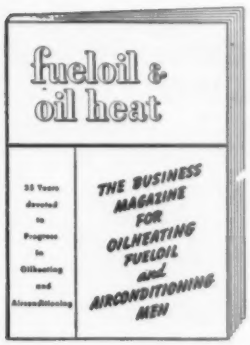
☆ ☆ ☆

Concentrate Your Advertising
(and Your Reading) in FUELOIL & OIL HEAT!

The oiheating-fueloil dealer's sales formula means *profits* to you! It's as simple as razors-and-blades. If you sell thousands of razors, you can sell millions of blades, and the oilheating-fueloil dealer has found that his high oiheating sales volume helps him sell millions of gallons of fueloil. No other retailer in the entire heating field has this double sales incentive. *No wonder* FUELOIL & OIL HEAT'S *readers sell oilheating equipment so aggressively!*

Tell Your Sales Story Fully in Our Important October Issue!

October will bring you top sales opportunities—it's the month in which oilheating-fueloil dealers sell about 13.5% of their year's oilheating installations, secure about 9.9% of their "service calls" income, and deliver about 6.8% of their annual fueloil gallonage. Following last year's sales pattern, oilheating manufacturers should ship about 13% of their year's total in October, and secure 8.3% of their new dealer and jobber accounts. *And remember, oilheating installations, for the first seven months of this year, are running 15% ahead of 1958!*



October Ad Forms Open Until September 10th.
How Much Space Should We Reserve For YOU?

HEATING PUBLISHERS, INC.

2 West 45th St., New York 36, N. Y. • (MUrray Hill 2-4786)
A. G. WINKLER, *Adv. Dir.* LEE STEEDLE, *Adv. Mgr.*

Eastern Adv. Mgr.: DICK RAYMOND

Midwest: Larry Alles, 224 So. Michigan Ave., Room 200, Chicago 4 (WAbash 2-9548)—*Pacific Coast:* Don Harway, 1709 W. 8th St., Los Angeles 17, Calif. (HUbbard 3-5141).

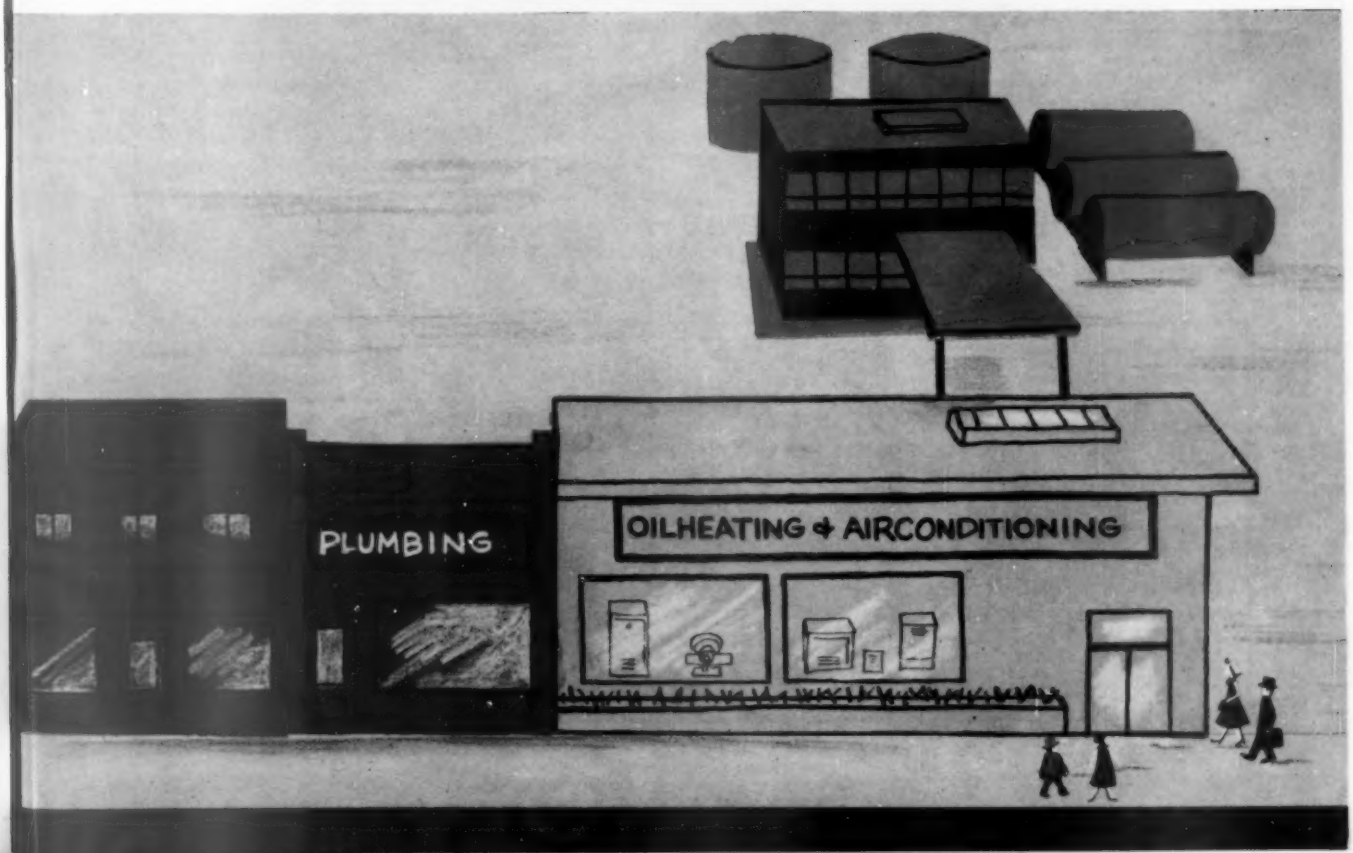
AUDITED PAID CIRCULATION ABC · MEMBER OHI · MEMBER BPA

Since July 1922—37 Years of Service to YOU

Strongest Sales Combination!

Fueloil & Oil Heat's Readers:

- √ **Sell Most of the Oilheating**
  (New and Replacements)
- √ **Sell Most of the Fueloil**
- √ **Do Most of the Oilheating Service**
  (Requiring Parts, Acessories, and Controls)
- √ **And 36% of our dealers sell Central Cooling**



For the FUEL OIL DEALER: The FUEL DELIVERY PREDICTOR

Simple! Accurate! Nothing to calculate! Customer records always in alphabetical order. Lucite dial indicates date of next scheduled delivery. A modern Degree Day system for large and small dealers at low cost.

The best time to start this system is NOW! If not completely satisfied return same within 10 days for refund.

Start with trial package consisting of specially calibrated chart and supplies for 200 accounts, plus complete instructions how to achieve automatic deliveries without bothering with temperature records. EVERYTHING IS PRE-CALCULATED FOR YOU!

The fuel oil dealer is not particularly concerned with daily fluctuations of outdoor temperatures; he wants to know how long a tankful of oil will last and the proper interval between deliveries without ever incurring a run-out.

ONLY $8.50 postpd.
Western U.S. & Canada $9.00

BAASCH AUTOMATIC DELIVERY SYSTEM, P. O. BOX 14 FLORAL PARK, N. Y.

Cooperative oilheating promotion Programs

(*Begins on page 70*)

WASHINGTON, D. C.

Oil Heat Institute of Greater Washington
Graham Shields, Exec. Secy.
1507 M. St., N.W.
Washington 5, D. C.
Amount of Budget: $19,656

WISCONSIN

Wisconsin Petroleum Association (State)
K. C. King, Exec. Secy.
318 Tenney Bldg.
Madison 3, Wis.
Amount of Budget: $57,816

TOTAL BUDGET FOR NATIONAL FUELOIL COUNCIL PROGRAMS $1,699,109

Pacific Northwest Programs**

NEVADA

OHI of Northern Nevada
E. A. Miranda
1345 W. 4th St.
Reno, Nevada
Amount of Budget: $6,000

OREGON

OHI of Oregon
Len Gassner
433 N.E. 22d Ave.
Portland, Ore.
Amount of Budget: $145,126

WASHINGTON

Oil Heat Institute of Washington
Robert Elmslie
400 Dexter Ave.
Seattle 9, Wash.
Amount of Budget: $201,750

Oil Heat Institute of Inland Empire
J. C. Langdon
706 Hutton Bldg.
Spokane, Wash.
Amount of Budget: $58,450

TOTAL BUDGET FOR PACIFIC NORTHWEST PROGRAMS $411,326

**Conducted by Pacific Northwest Regional Advisory Committee, composed of representatives of major oil companies and independent fueloil distributors, working through local chapters.

Radio Corp. of America, New York 20, N. Y., has appointed these manufacturers' representatives for mobile radio equipment: Spiteri's Electronics, Erie, Pa.; Radio Communications Service, Evansville, Ind.; Frosch Theatre Supply, Inc., Minneapolis; Communications Sales, Inc., Youngstown, Ohio; Electronics Specialty Co., Charleston, W. Va.; Delta Communications, Inc., New Orleans and Klaus Radio and Electric Co., Peoria, Ill.

Petroleum Systems, Inc., named distributor in the Detroit area of positive displacement pumps made by Blackmer Pump Co., Grand Rapids, Mich., and for petroleum metering devices made by Rockwell Manufacturing Co., Pittsburgh.

R. J. (Bud) Heiting has been named sales representative for Jackson & Church in the Chicago area. Formerly with Heil-Quaker, Heiting will launch a new sales program for industrial, commercial and institutional warm air furnaces.

Another sales representative for the company is *Friemel-Love Co.*, St. Louis, covering eastern Missouri and southern Illinois.

John E. Boyd has become a member of the field sales staff in the Long Island, N. Y., territory for Ralph N. Brodie Co., San Leandro, Calif. He has been with the Brodie organization for 12 years and has held positions in field service and field engineering in the Eastern Division at Mt. Vernon, N. Y.

CLEARITE TESTER

PROVIDES COMPLETE CHECK ON OIL PUMP AND SUCTION LINES

- BLEEDS PUMP QUICKLY — NO MESS
- INDICATES DIRT AND WATER IN OIL
- CHECKS PRESSURE TO NOZZLE
- SHOWS POOR PUMP CUT-OFF
- TELLS BY VACUUM IF PUMP IS GOOD
- SUCTION LINE LEAKS FOUND EASILY
- SHOWS SUCTION LINE RESTRICTIONS
- FITS ANY MAKE AND STYLE PUMP
- SELLS FILTERS, FUEL PUMPS, SOLENOID VALVES AND NOZZLES
- SAVES TIME — AVOIDS CALL-BACKS

The Clearite gives an answer to virtually every problem that could exist in supplying fuel oil from the tank to the nozzle. Easy and quick to use. Instructions provided.

For Information Write To ➔

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BOX 147 OAK LAWN, ILL.
GArden 2-4459

Use "CRESCENT PARTS" Service

Serving St. Louis Trade Area

"FACTORY REBUILT" Repair Exchange control service on all popular makes at regular manufacturers list prices and trade discounts.

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Minneapolis-Honeywell
White-Rodgers
Detroit • Perfex
Penn
Marshall • General

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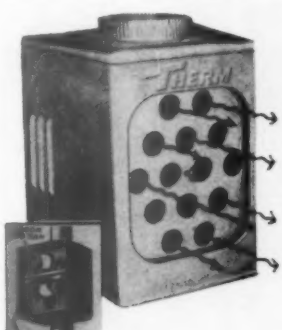

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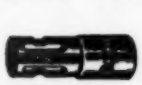

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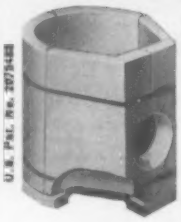

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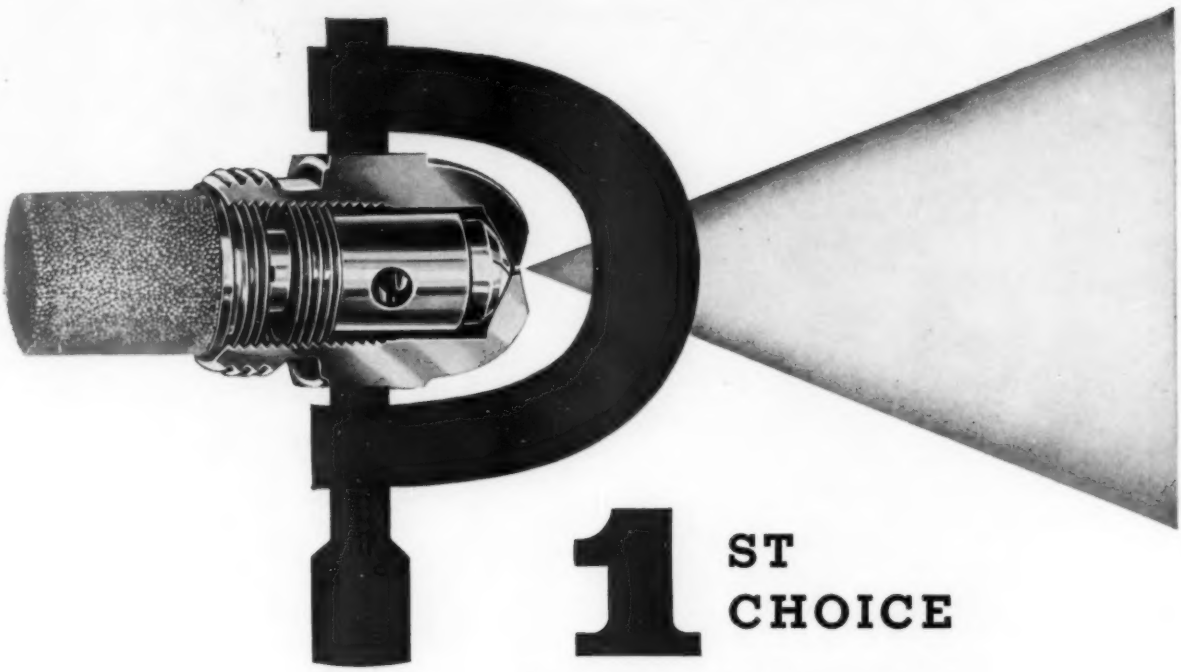

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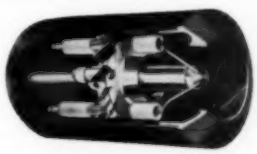

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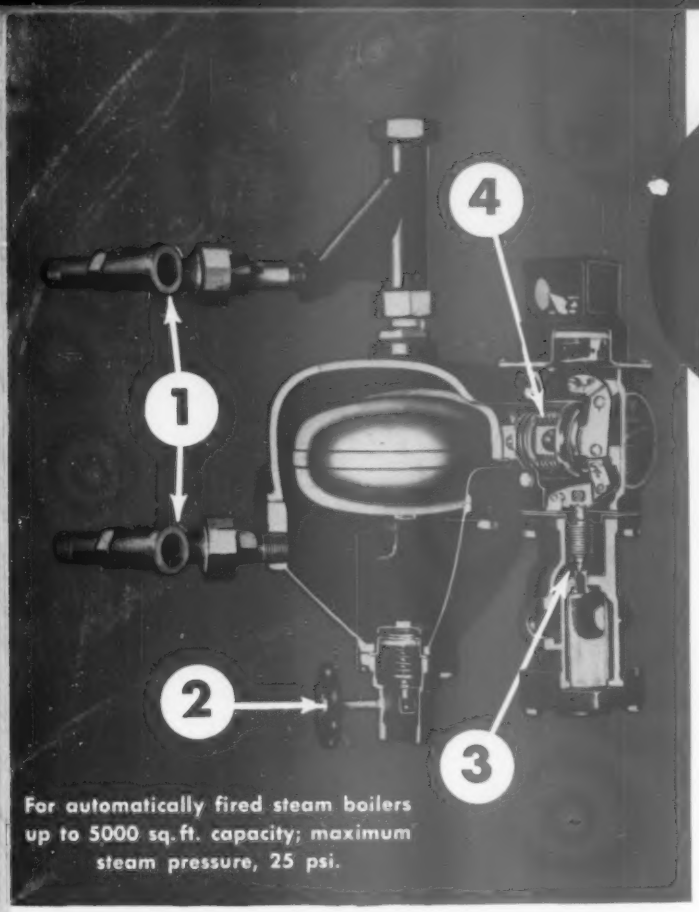

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